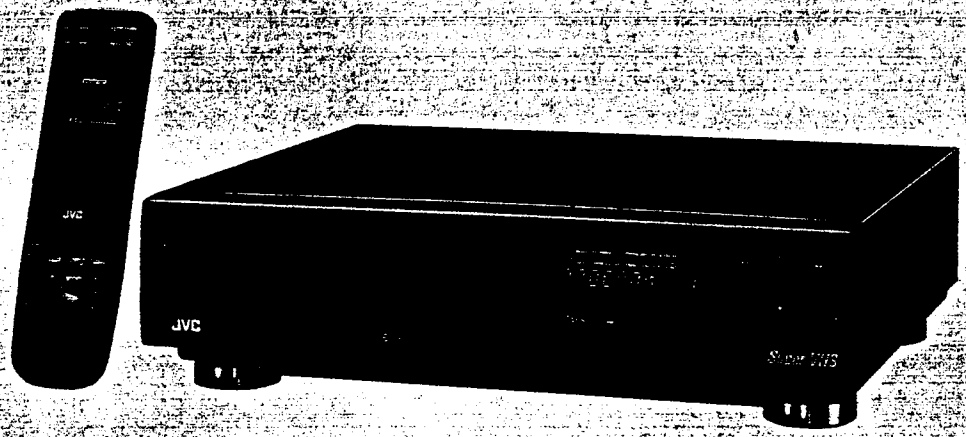
JVC

SERVICE MANUAL

STEREO VIDEO CASSETTE RECORDER

HR-S4700E/EG/EK



S-VHS 625

VHS PAL

SPECIFICATIONS

(The specifications shown pertain specifically to the model HR-S4700E/EG)

GENERAL

Power requirement	:	AC 220 – 240 V~, 50/60 Hz
Power consumption	:	39 W
Temperature	:	5°C to 40°C (Operating)
	:	–20°C to 60°C (Storage)
Operating position	:	Horizontal only
Dimensions (WxHxD)	:	435 x 123 x 373 mm
Weight	:	7.1 kg
Format	:	S-VHS/VHS PAL standard
Tape width	:	12.65 mm
Tape speed (SP)	:	23.39 mm/sec
Tape speed (LP)	:	11.70 mm/sec
Maximum recording time (SP)	:	240 min. with E-240 video cassette
(LP)	:	480 min. with E-240 video cassette

VIDEO

Signal system	:	PAL colour and separated Y/C signals, 625 lines/50 fields
Recording system	:	Rotary two-head helical scan system with slant double-azimuth combinations video heads
Input	:	0.5 to 2.0 Vp-p/ 75 ohms, unbalanced
Output	:	1.0 Vp-p, 75 ohms, unbalanced
Signal-to-noise ratio	:	43 dB (Rohde & Schwarz noise meter)
Horizontal resolution	:	250 lines (VHS)
	:	400 lines (S-VHS)

AUDIO

Input	:	MIC: 40 dBs, high impedance, unbalanced
	:	AUDIO IN connector (RCA x 2): –8 dBs, 50 k-ohms, unbalanced
	:	AUDIO/VIDEO socket (21-pin Peri connector): –3.8 dBs, (CENELEC standard), 10 k-ohms, unbalanced
Output	:	AUDIO OUT connector (RCA x 2): –6 dBs, high-impedance load less than 1 k-ohm, unbalanced (100 k-ohms, load)
	:	AUDIO/VIDEO socket (21-pin Peri connector): –3.8 dBs, (CENELEC standard), high-impedance load less than 1 k-ohm, unbalanced

NORMAL AUDIO

Recording system	:	Longitudinal track
No. of audio channels	:	1 (monaural)
Frequency range	:	70 Hz to 10,000 Hz

HI-FI AUDIO

Recording system	:	Deep-layer recording system conforming to stereo Hi-Fi VHS standard
No. of audio channels	:	2 Hi-Fi audio channels
Frequency response	:	20 Hz to 20,000 Hz
Dynamic range	:	More than 90 dB
Wow and flutter	:	Less than 0.005% W.RMS

TUNER

Tuning system	:	Frequency synthesized tuner
TV channel storage capacity	:	48 positions (VHF/UHF)
Channel coverage	:	VHF: 46 – 111 MHz 111 – 300 MHz 302 – 470 MHz (Hyper band for PAL)
		UHF: 470 – 862 MHz
		UHF channel 38 – 41 (adjustable 32 – 40)
Aerial output	:	75 ohms, unbalanced

TIMER

Clock reference	:	Quartz-crystal
Programme capacity	:	1-year/8-programme timer
Memory backup time	:	60 min.

ACCESSORIES

Provided accessories	:	Aerial cable Infrared remote control unit "R6" battery x 2 Audio cable S-Video cable
Optional accessories (EG)	:	VPV adapter: VU-V120E VPT adapter: VU-V140E RGB signal converter: KM-V7EG
Optional accessories (E)	:	VPS adapter: VU-V110E VPV adapter: VU-V120E VPS/VPV adapter: VU-V100E VPT adapter: VU-V140E VPS/VPT adapter: VU-V150E RGB signal converter: KM-V7EG

Specifications shown are for SP mode unless otherwise specified.

Design and specifications subject to change without notice.

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No. 82278

November 1991

NOTE: For a technical description, please refer to Technical Guide VTG82070 HR-S4700 PAL

TABLE OF CONTENTS

Section	Title	Page
	Important Safety Precautions	
	INSTRUCTIONS	
	1. DISASSEMBLY AND MECHANISM ADJUSTMENTS	
1.1	DISASSEMBLY	1-1
1.2	MECHANISM ADJUSTMENTS	1-4
1.3	MAIN MECHANISM PARTS	1-5
1.4	INSPECTION AND MAINTENANCE	1-7
1.5	MAIN PARTS REMOVAL AND REPLACEMENT	1-8
	2. ELECTRICAL ADJUSTMENTS	
2.1	PREPARATION	2-1
2.2	SWITCHING REGULATOR CIRCUIT	2-3
2.3	SERVO CIRCUIT	2-3
2.4	VIDEO CIRCUIT	2-4
2.5	AUDIO CIRCUIT	2-7
2.6	ON SCREEN CIRCUIT	2-8
2.7	TIMER CIRCUIT	2-8
2.8	TUNER/IF CIRCUIT	2-9
	3. CHARTS AND DIAGRAMS	
3.1	CIRCUIT BOARD AND LOCATION	3-1
3.2	GENERAL INFORMATION	3-2
3.3	BOARD INTERCONNECTION (E/EG Only)	3-3
3.4	BOARD INTERCONNECTION (EK Only)	3-5
3.5	SYSTEM CONTROL (M-CTL) BLOCK DIAGRAM	3-7
3.6	SERVO BLOCK DIAGRAM	3-9
3.7	AUDIO BLOCK DIAGRAM	3-11
3.8	VIDEO & VIDEO UNIT BLOCK DIAGRAM	3-13
3.9	SW REG, REGULATOR (1), (2) AND PRIMARY SCHEMATIC DIAGRAMS	3-17
3.10	SW REG, REGULATOR (1),(2) AND PRIMARY CIRCUIT BOARDS	3-19
3.11	MECHACON SCHEMATIC DIAGRAM	3-21
3.12	DECK TERMINAL, LOADING MDA, CAPSTAN MDA & C. HOUSING SCHEMATIC DIAGRAMS	3-23
3.13	DECK TERMINAL, LOADING MDA, A/CTL HEAD & C. HOUSING CIRCUIT BOARDS	3-24
3.14	SERVO SCHEMATIC DIAGRAM	3-25
3.15	AUDIO SW SCHEMATIC DIAGRAM	3-27
3.16	A/S/M CIRCUIT BOARD	3-29
3.17	AUDIO UNIT SCHEMATIC DIAGRAM	3-31
3.18	AUDIO UNIT CIRCUIT BOARD	3-33
3.19	VIDEO UNIT SCHEMATIC DIAGRAM	3-35
3.20	VIDEO UNIT CIRCUIT BOARD	3-39
3.21	ON SCREEN SCHEMATIC DIAGRAM	3-41
3.22	VIDEO INTERFACE SCHEMATIC DIAGRAM	3-43
3.23	VIDEO INTERFACE CIRCUIT BOARD	3-45
3.24	VIDEO SUB, TERMINAL, TERMINAL 2, VIDEO I (TERMINAL), WIDE ASPECT SUB & JACK SCHEMATIC DIAGRAMS	3-47
3.25	WIDE ASPECT, TERMINAL, TERMINAL 2 & JACK CIRCUIT BOARDS	3-49
3.26	PRE AMP SCHEMATIC DIAGRAM	3-51
3.27	REC AMP SCHEMATIC DIAGRAM	2-53
3.28	FMA/PRE AMP SCHEMATIC DIAGRAM	3-55
3.29	PRE AMP CIRCUIT BOARD	3-56
3.30	REC AMP CIRCUIT BOARD	3-57
3.31	IF & TUNER/CTL SCHEMATIC DIAGRAMS (E/EG Only)	3-59
3.32	IF & TUNER/CTL SCHEMATIC DIAGRAMS (EK Only)	3-61
3.33	DEMODULATOR SCHEMATIC DIAGRAM (E/EG Only)	3-63
3.34	DEMODULATOR SCHEMATIC DIAGRAM (EK Only)	3-65
3.35	IF & TUNER CTL CIRCUIT BOARDS	3-67
3.36	DEMODULATOR CIRCUIT BOARD	3-69
3.37	TIMER & SW/DISPLAY SCHEMATIC DIAGRAMS	3-71
3.38	TIMER & SW/DISPLAY CIRCUIT BOARDS	3-73
3.39	REMOTE CONTROL SCHEMATIC DIAGRAM	3-75
3.40	RF CONVERTER SCHEMATIC DIAGRAM (E/EG)	3-76
3.41	RF CONVERTER & MIX BOOSTER SCHEMATIC DIAGRAM	3-76
	4. EXPLODED VIEWS AND PARTS LIST	
4.1	PACKING ASSEMBLY <M1>	4-1
4.2	CABINET ASSEMBLY <M2>	4-2
4.3	CHASSIS ASSEMBLY <M3>	4-3
4.4	MECHANISM ASSEMBLY <M4>	4-4
4.5	REMOTE CONTROL UNIT <M5>	4-6
	5. ELECTRICAL PARTS LIST	
	SWITCHING REGULATOR BOARD ASSEMBLY <01><02><60>	5-1
	A/M/S BOARD ASSEMBLY <04>	5-3
	WIDE ASPECT SUB BOARD ASSEMBLY <33>	5-7
	VIDEO UNIT BOARD ASSEMBLY <05>	5-9
	TERMINAL BOARD ASSEMBLY <06>	5-12
	TUNER/IF BOARD ASSEMBLY <07>	5-12
	TUNER CONTROL BOARD ASSEMBLY <08>	5-14
	AUDIO UNIT BOARD ASSEMBLY <09>	5-14
	VIDEO INTERFACE BOARD ASSEMBLY <10>	5-16
	A/CTL HEAD BOARD ASSEMBLY <12>	5-21
	DEMODULATOR BOARD ASSEMBLY (E, EG) <14>	5-22
	DEMODULATOR BOARD ASSEMBLY (EK) <14>	5-22
	TIMER BOARD ASSEMBLY <20>	5-24
	JACK BOARD ASSEMBLY <24>	5-25
	SWITCH DISPLAY BOARD ASSEMBLY <28>	5-26
	TERMINAL 2 BOARD ASSEMBLY <36>	5-27
	PRE AMP BOARD ASSEMBLY <42>	5-28
	REC AMP BOARD ASSEMBLY <43>	5-28
	DECK TERMINAL BOARD ASSEMBLY <51>	5-31
	LOADING MDA BOARD ASSEMBLY <55>	5-31
	CASSETTE HOUSING BOARD <56>	5-31
	UPPER DRUM BOARD ASSEMBLY <62>	5-31

1. The Instructions shown pertain specifically to the Model HR-S4700E/EG. For detailed descriptions, be sure to consult the Instruction booklets of the other Models.
2. The following table lists the differing points between Models (suffixed HR-S4700E, HR-S4700EG and HR-S4700EK) in this series.

Item \ Model			HR-S4700EG	HR-S4700E	HR-S4700EK
TV TUNER	Channel coverage	VHF	47 to 111 MHz	← *1)	No
			111 to 300 MHz	← *1)	No
			No	302 to 470 MHz	No
		UHF	470 to 862 MHz	← *1)	←
TIMER	Memory back-up time		60 min	60 min	Minimum 3 min
	VPS		Built-in	Option (VU-V110E)	No
TELETEXT	VPV		Option (VU-V120E) *2)	Option (VU-100E) *3)	No
	VPT (with TOP)		Option (VU-V140E) *2)	Option (VU-V150E) *3)	Option (VU-V140E) *2)

Notes: *1) ← *The same as model at left.*
*2) *VU-V120E/VU-V140E without VPS*
*3) *VU-V100E/VU-V150E with VPS*

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer or responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are mainteined.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING — DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

IMPORTANT

Connection to the mains supply plug in the United Kingdom.

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with the following code:

Blue to N (Neutral) or Black
Brown to L (Live) or Red

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal coded N (Neutral) or coloured Black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt — consult a competent electrician.

CAUTION

- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

IMPORTANT

Pre-recorded tapes, records or discs should not be re-recorded without the consent of the owners of copyright in the sound recording and in any copyright musical or literary work embodied in that recording as this constitutes an infringement of copyright.

Omkopplaren OPERATE på denna apparat är sekundärt kopplad och skiljer inte apparaten från nätet I läge OPERATE OFF.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

BEMAERK: I stilling OFF er apparatet stadig forbundet med lysnettet Hvis det ønskes fuldstændig afbrudt skal netledningen trækkes ud.

This unit is produced to comply with Directives 76/889/EEC, 82/499/EEC, 87/308/EEC and Standard IEC Publ. 65.

Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

S-VHS VHS PAL 625

Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".

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Some Do's And Dont's On The Safe Use Of Equipment

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

DO consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

DO be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damanged in any way — switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family knows how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of road safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

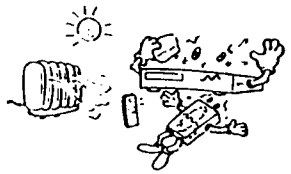
ABOVE ALL

— NEVER let anyone especially children push anything into holes, slots or any other opening in the case — this could result in a fatal electrical shock;

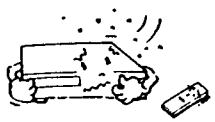
— NEVER guess or take chances with electrical equipment of any kind — it is better to be safe than sorry!

Precautions

Recorder, Remote Control, And Cassette Care

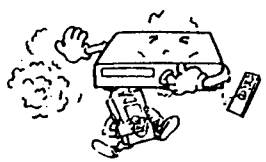


Avoid extreme heat and direct sunlight

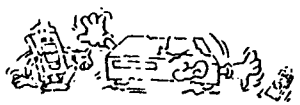


Avoid extreme cold

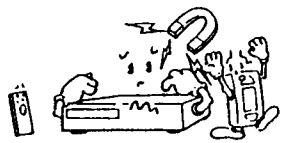
Avoid extreme humidity



Avoid dust

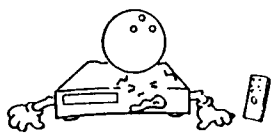


Avoid places subject to vibrations

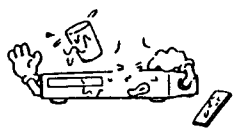


Avoid strong magnetic fields

Do not block the recorder's ventilation openings



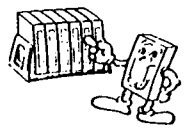
Do not place anything heavy on the recorder or remote control



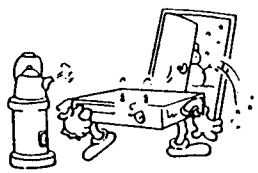
Do not place anything which might spill on top of the recorder or remote control

Do not place the recorder on cushions, pillows, or thick carpeting

Use the recorder in a stable, horizontal position only

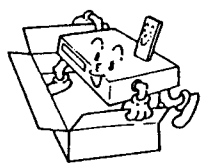


Place cassettes in cassette cases and store vertically



Beware of moisture condensation

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions — just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder's power turned on for a few hours to let the moisture dry.



When transporting

- Be sure to remove cassette from recorder before packing
- Avoid violent shocks to the recorder during packing and transport

Contents

Controls, Indicators, And Connectors 5
Getting To Know Your Video Recorder 7

Getting Started With Your Video Recorder
Making The Right Connections 9
Handling Video Cassettes 12
Setting The Clock 13
Setting The Tuner 14
Mode Displays — What They Mean 15
On-Screen Set Up 16

Basic Operation Of Your Video Recorder
Playback 17
Recording 18
Timer-Recording 19

Advanced Functions On Your Video Recorder
For Playback 23
For Recording 25
For Tape Access 29
For Timer-Recording 30
For Editing 33

Managing Your Video Recorder
Special Operations 36
Using The Remote Control For TV Operation 38
Using The Optional Teletext Adapter 39

List Of Display Panel Messages 40
Specifications 41
Channel Number Guide 42
In Case Of Difficulties 43
Special Note On Head Cleaning 44

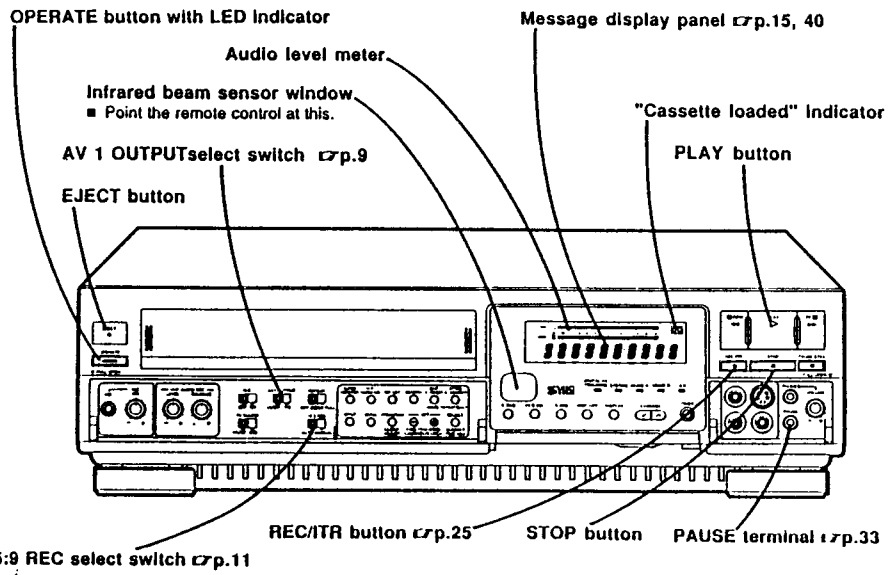
How To Use This Instruction Manual

This instruction manual has been designed with both new and experienced users in mind. The first half offers detailed, step-by-step instructions for setting up your video recorder, and on using its basic functions. The second half provides instructions on the many other functions available on your video recorder. So just by following the instructions on the "Getting Started" and "Basic Operation" sections of this manual, you can master all of your recorder's basic functions, including timer-recording. Once you're sufficiently familiar with basic operation, or if you're already an experienced video user, you can move on to the more advanced functions introduced on the following pages. Related features have all been clustered together for easy reference, and their categories (playback, recording, timer, etc.) are easily recognisable by the symbol appearing in the page header. If you ever need to refer to another page for instructions or information, you will be told so by a ☞ mark pointing to the page number.

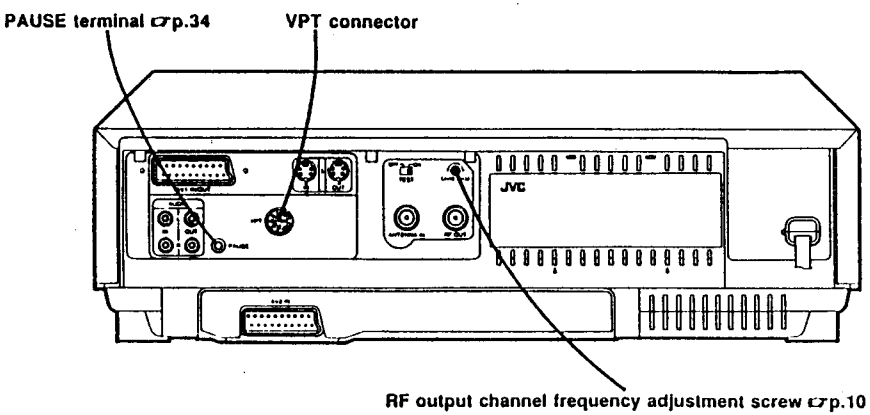
Remember, you must use your video recorder correctly to fully enjoy it. Please use this manual effectively. It's the surest and quickest way to unlock the full potential of your new JVC video recorder.

Controls, Indicators, And Connectors

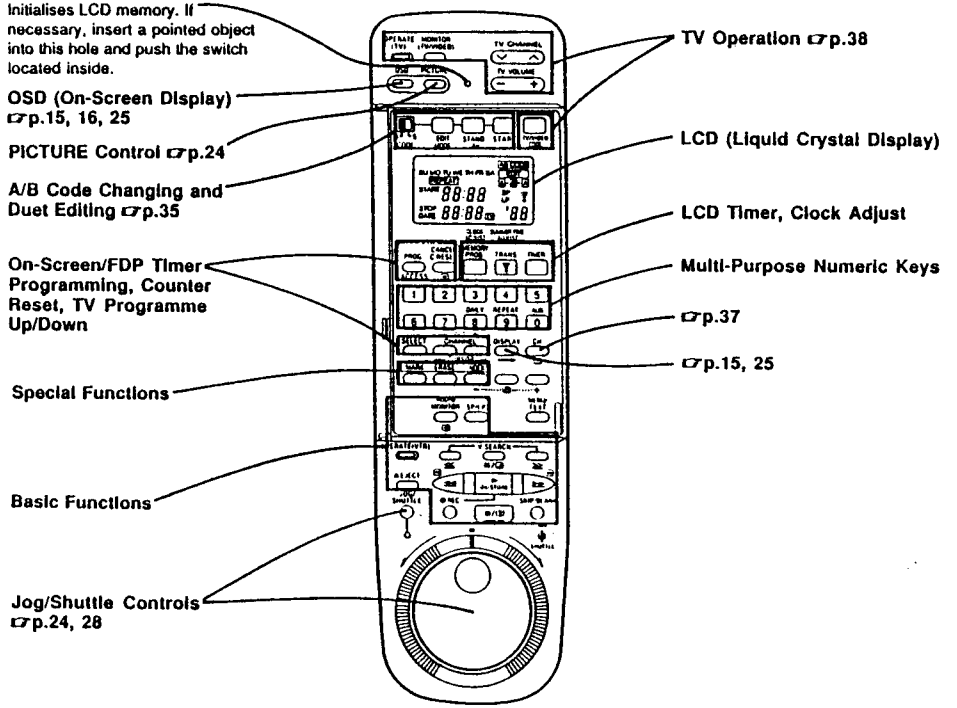
Front Panel



Back Panel



Wireless Remote Control

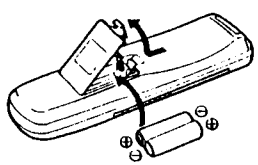

Initialises LCD memory. If necessary, insert a pointed object into this hole and push the switch located inside.
OSD (On-Screen Display) ☞p.15, 16, 25
PICTURE Control ☞p.24
A/B Code Changing and Duet Editing ☞p.35
On-Screen/FDP Timer Programming, Counter Reset, TV Programme Up/Down
Special Functions
Basic Functions
Jog/Shuttle Controls ☞p.24, 28
TV Operation ☞p.38
LCD (Liquid Crystal Display)
LCD Timer, Clock Adjust
Multi-Purpose Numeric Keys
☞p.37
☞p.15, 25

NOTE:
Some buttons have additional labels (mostly pictograms) for teletext operations. You will find instructions for these in the Instruction Manual of the teletext adapter. ☞p.39

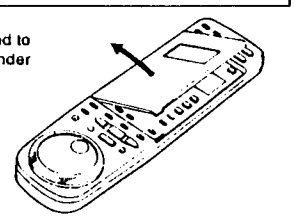
How To Use
The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets of JVC and other brands. ☞p.38.
- Point the remote control at the sensor window.
- The maximum operating distance of the remote control is about 8 m.

Installing Batteries

1. Open the battery compartment cover as illustrated.
2. Insert 2 "R6"-size batteries (provided) in the correct directions.
3. Replace the cover.

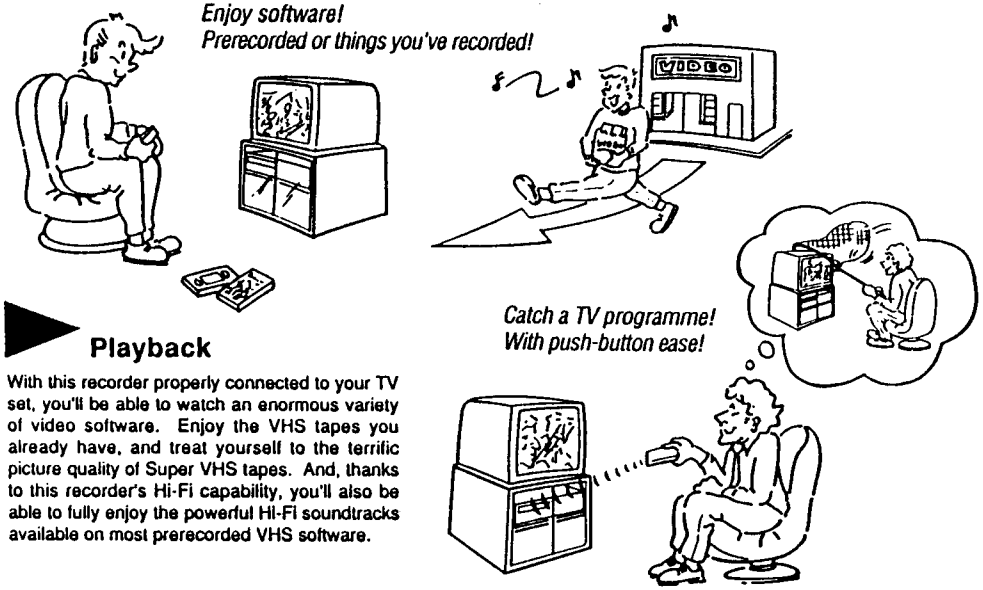


Open the lid as illustrated to access the buttons under the lid.



Getting To Know Your Video Recorder

The 3 Basic Ways Of Using Your Video Recorder



Enjoy software!
Prerecorded or things you've recorded!

Catch a TV programme!
With push-button ease!

Playback

With this recorder properly connected to your TV set, you'll be able to watch an enormous variety of video software. Enjoy the VHS tapes you already have, and treat yourself to the terrific picture quality of Super VHS tapes. And, thanks to this recorder's Hi-Fi capability, you'll also be able to fully enjoy the powerful Hi-Fi soundtracks available on most prerecorded VHS software.

Record TV programmes while you're away.
Watch TV programmes when you want.

Recording

This recorder offers you a choice of recording in either VHS or S-VHS. Thanks to S-VHS's high resolution, you'll be able to record TV programmes without any loss of the original picture quality. S-VHS is economical too, because you can record in the longer LP mode and still get excellent picture quality. And any time you need to record in VHS — no problem. Just insert a VHS cassette and you're ready to go.

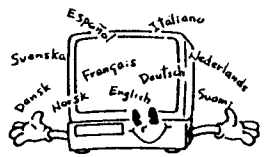
Timer-Recording

By using the built-in timer, you can set your video recorder to record TV programmes for you while you're asleep, while you're away, or while you're doing something else. Then you can watch those programmes later, whenever it's convenient, whenever you want. This is what's called "timeshifting", and now you can do it the JVC way.

Some Other Functions On Your Video Recorder

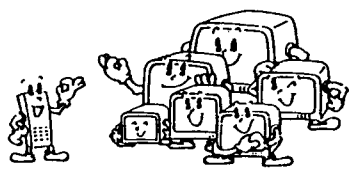
"Message" Display Panel

The video recorder "talks" to you from its message display panel. It's easy to understand what the recorder is doing at any time — a friendlier way to interact with your video deck.



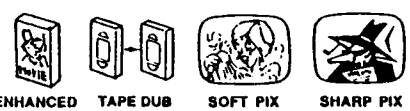
Multi-Language On-Screen Display

Ten languages to choose from. So you can check the engaged mode, program the timer, and more, while watching on-screen messages in your own language.



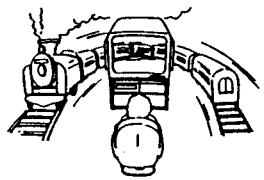
Multi-Brand-TV-Compatible Remote Control

Compatible with most major brands of televisions for basic control functions. Put an end to two-handed remote control.



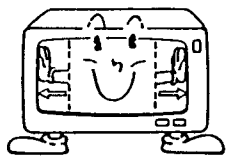
Picture Control

One-touch control over the type of video picture you want. Make it clearer, make it better for dubbing, make it softer, make it sharper — do it all with Picture Control.



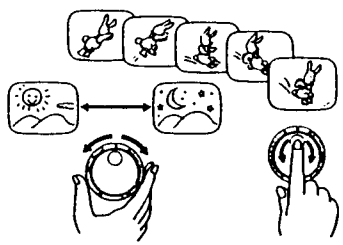
Hi-Fi Stereo Sound

Enjoy films with Hi-Fi stereo soundtracks just as you would in theatres. Use the built-in digital stereo sound decoder to record NICAM stereo or dual-audio programmes.



Auto 16:9

Recording/playback of wide aspect ratio programmes with automatic detection. Puts you in touch with the latest in broadcast entertainment.



Jog/Shuttle Controls

Fast, accurate visual search from slow motion to fast motion, or frame-by-frame search, in either direction. Useful in editing or playback.

Making The Right Connections

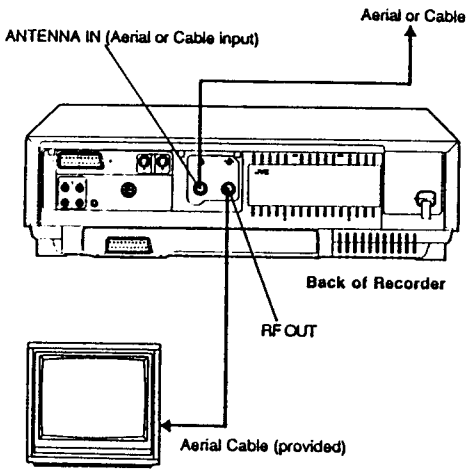
It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.

A RECORDER-TO-TV CONNECTION

RF CONNECTION

For TV sets without AV input terminals:

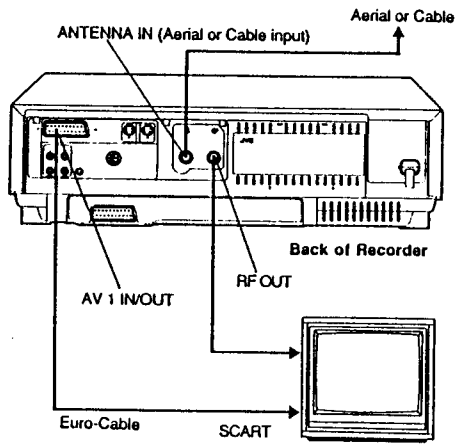
1. Connect the TV aerial cable to the recorder.
2. Connect the recorder to the TV's aerial terminal.



AV CONNECTION

For TV sets with AV input terminals:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder to the TV's 21-pin SCART connector.



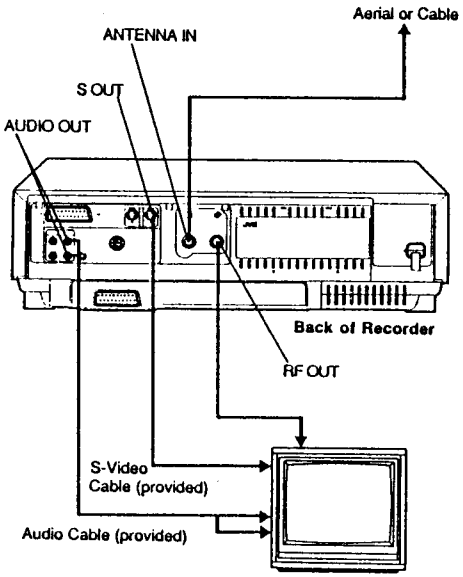
The AV1 IN/OUT connector accepts only a composite signal (regular video signal), but can deliver either a composite video signal or a Y/C signal (a signal in which the luminance and chrominance signals are separated) according to the setting of the front panel AV1 OUTPUT switch.

- If your TV's SCART connector is compatible only with the regular video signal, set this switch to COMP.
- If your TV's SCART connector is compatible with the Y/C signal, set this switch to Y/C. You will better enjoy high-quality S-VHS pictures.
- If your TV's SCART connector is RGB-compatible, connect the KM-V7EG RGB Signal Converter (optional) between the AV1 IN/OUT connector and the TV's SCART connector, and set this switch to Y/C. The Y/C signal will be converted into an RGB signal for reproduction of high-quality S-VHS pictures.

S-VIDEO CONNECTION

For TV sets with an S-VIDEO input terminal:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder's S OUT terminal to the TV's S-VIDEO IN terminal.
3. Connect the recorder's AUDIO OUT terminals to the TV's AUDIO IN terminals.



NOTES:

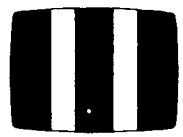
- To make the most of Super VHS picture performance, we recommend you use the S-VIDEO connection.
- To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).
- If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction.

B ADJUST VIDEO CHANNEL (UHF 36)

With an RF connection, the video recorder sends picture and sound signals through the connecting cable to your TV on UHF channel 36.

TEST SIGNAL

1. Turn on the recorder.
2. Set the TEST switch to ON.
3. Set your TV to the video channel. Tune to the real channel 36, to bring the two vertical white bars on the screen most clearly.
   - Your TV should be set to the channel designated for use with a video recorder or to a spare channel if there is not a specified channel.



4. Reset the TEST switch to OFF.

NOTE:

If some interference noise is seen on the screen because of broadcasts on neighbouring channels, it is necessary to shift the video channel from UHF channel 36. This is possible for UHF channels 32 through 40. Consult your JVC dealer for making this adjustment.

IMPORTANT:

With RF Connection

- It is always necessary to set your TV's channel to VIDEO CHANNEL to operate the recorder with your TV.

With AV Connection

- Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.
- For switching the TV's mode, refer to the instruction manual of your television.

With S-VIDEO Connection

- Set your TV to the VIDEO (or AV) mode. The S-VIDEO connection has priority over AV connection.

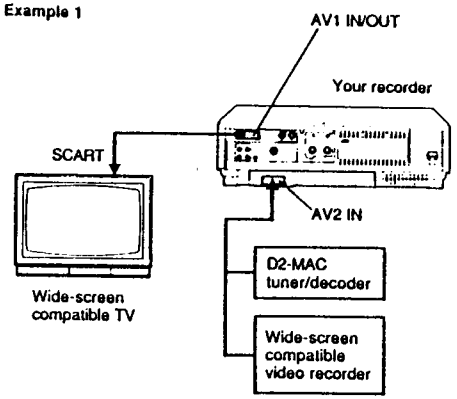
Making The Right Connections (Cont'd)

Wide-Screen Viewing And Recording

If your television is compatible with the 16:9 wide-screen format, please read this page to take full advantage of this recorder's Auto 16:9 function.

How To Connect The Sources

Example 1



What Your Video Recorder Does

Set this switch to AUTO. Then your recorder will automatically record wide-screen programmes as "wide" and normal programmes as "normal".
Whichever position of this switch is selected, your recorder will automatically:

- play back wide-screen programmes as "wide" and normal programmes as "normal".
- control the television (if equipped with Auto Aspect Ratio Switching function) so that both types of programmes are displayed with the right proportions.

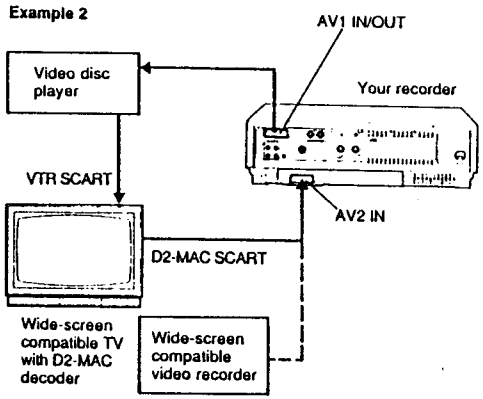
NOTES:

- For the recorder to control the television, it must be connected to the TV via the AV1 IN/OUT connector.
- For the recorder to record in the correct mode automatically, the signal must be applied to either the AV1 IN/OUT or AV2 IN connector.
- When recording wide-screen programmes via the S INPUT (S IN) or V INPUT connector, for example in tape-to-tape dubbing, set the 16:9 REC switch to MANUAL.
- When playing back wide-screen programmes via the S OUT connector, switch the television to the 16:9 mode manually.

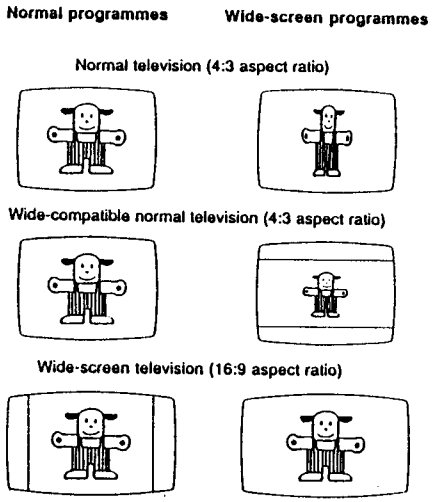
Available Sources Of Wide-Screen Programmes

Available sources include D2-MAC broadcasts, teletext broadcasts, video discs and video tapes.

Example 2



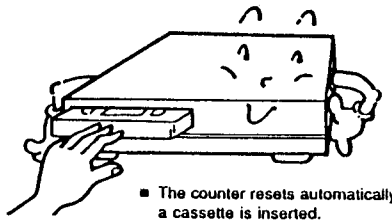
What You See On The Screen


Normal programmes
Wide-screen programmes
Normal television (4:3 aspect ratio)
Wide-compatible normal television (4:3 aspect ratio)
Wide-screen television (16:9 aspect ratio)

Handling Video Cassettes

A LOADING A CASSETTE

1 Insert a cassette with its label side facing you.
- If the cassette is not loaded firmly it will be ejected.



- The counter resets automatically when a cassette is inserted.

B UNLOADING A CASSETTE

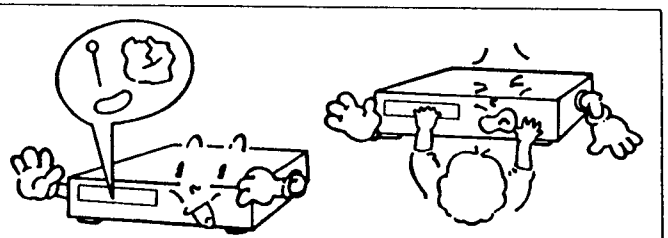
1 Press EJECT.
- If the cassette will not eject, check to see if "TIMER" is displayed on the message display panel. If it is, press the TIMER button to turn it off.

NOTES:

- Be sure to insert the cassette firmly into the slot; otherwise it will be automatically ejected.
- The automatic loading mechanism will operate only when the cassette is inserted correctly.

WARNING

- Do not insert fingers or foreign objects into the cassette loading slot since this could lead to injury or damage to the mechanism. Be especially careful with children.
- Do not try to pull out a cassette once automatic loading has started.



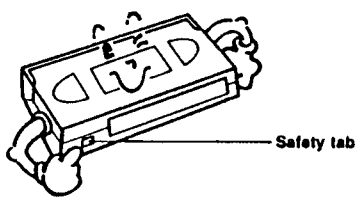
Usable Cassettes And Their Recording Times

Both regular VHS and S-VHS cassettes can be used with your recorder. However, to make S-VHS recordings, you must use S-VHS cassettes.

	Type of Cassette	Recording/Playback Time SP (Standard Play)	LP (Long Play)
VHS	E-30	30 minutes	1 hour
	E-60	1 hour	2 hours
	E-90	1 hour, 30 minutes	3 hours
	E-120	2 hours	4 hours
	E-180	3 hours	6 hours
	E-240	4 hours	8 hours
S-VHS	SE-30	30 minutes	1 hour
	SE-60	1 hour	2 hours
	SE-180	3 hours	6 hours

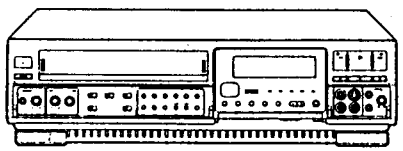
Accidental Erasure Prevention

To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.

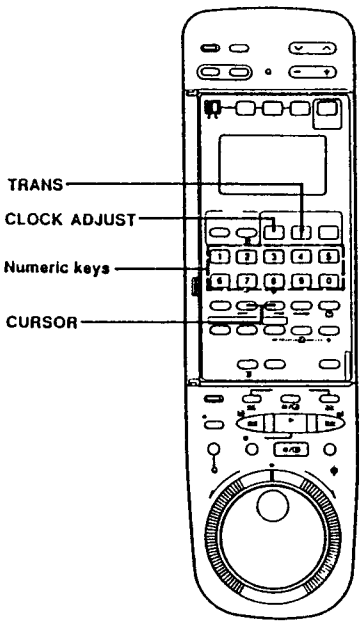


Setting The Clock

Since your video recorder bases all of its timer recording start and stop "decisions" on the time kept by its built-in clock, accurate setting of this clock is crucial for proper timer-recording results. And, since the remote control's LCD clock and the recorder's clock must be set to the same time, this chapter describes the most convenient way of setting both clocks — setting the remote control's LCD clock and transferring its contents to the recorder's clock.



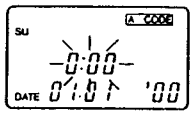
PLUG IN RECORDER



NOTE:
If you wish to set the recorder's clock directly referring to the message display, ☞p.36. For quick "summer time" (Daylight Saving Time) adjustment, ☞ p.36.

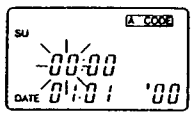
A LOAD BATTERIES (☞p. 6)

1 Check the LCD.
- The time display section (0:00) will be blinking.



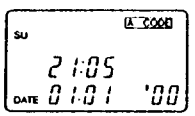
B START CLOCK SETTING

2 Press CLOCK ADJUST.
- Blinking digits will prompt you to items that can be set.



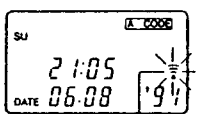
C INPUT THE TIME

3 Press the appropriate numeric keys.
- Example: For 21:05, press 2 1 0 5. Always enter "0" before single-digit entries.



D INPUT THE DAY/MONTH/YEAR

4 Press the appropriate numeric keys.
- Example: For 6th August, 1991, press 0 6 0 8 9 1. Always enter "0" before single-digit entries.
- After setting the year, the transfer-ready mark will appear and blink.



Transfer-ready mark

E TRANSFER AND START THE CLOCK

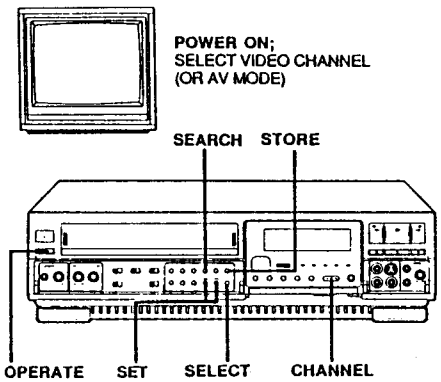
5 Press TRANS with the remote control directed to the recorder's Remote Sensor window..
- The day of the week will automatically appear.
- The remote control's clock will start. At the same time, the set data will be transferred to the recorder, and displayed on the screen for 5 seconds.

TO MAKE CORRECTIONS

Press either CURSOR button so that the item you want to change blinks.

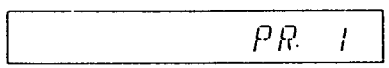
Setting The Tuner

The procedure introduced here lets you assign receivable channels in your area to channel positions on your video recorder's tuner. Once stored, these can be accessed with the CHANNEL ∨/∧ buttons. During channel scanning, empty tuner channel positions will be skipped so you won't have to go through any "blank" channels to get to the one you want.



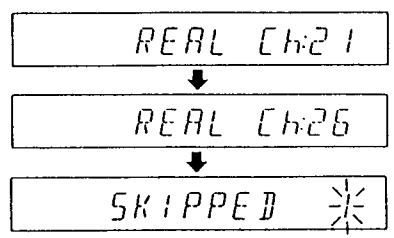
A TURN ON THE RECOMMENDED

1 Press OPERATE.



B SEARCH FOR RECEIVABLE CHANNELS

2 Press SEARCH.
- Automatic scanning will start at the lowest channel number, and stop when a broadcast is detected.

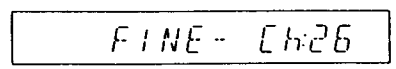


* For example in the London area (Crystal palace transmitter) it is convenient to select a channel position number 1 to 4 for BBC1, BBC2, ITV and CH4. The real channel numbers for these transmissions are BBC1 (26), BBC2 (33), ITV (23) and CH4 (30).
In the display example shown alongside therefore, channel position 1 for BBC1 would be tuned to a real channel number of 26.

C FINE-TUNE THE CHANNEL

- Check the picture on the TV screen, and fine-tune it if necessary. When the picture is clear, proceed to Step D.

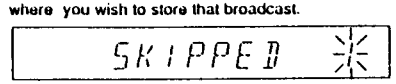
3 Press SELECT.
4 Press SET (+ or –) so that the "–" sign appears at the centre.



5 Press SELECT.

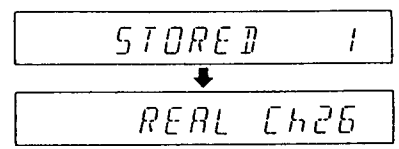
D SELECT A TUNER POSITION

6 Press CHANNEL to select the tuner channel position where you wish to store that broadcast.



E STORE THE CHANNEL

7 Press STORE.



- This message indicates that UHF channel 26 has been stored into the tuner's channel position 1.

F CONTINUE

8 Repeat steps 2 through 7 for other receivable channels.

TO CHANGE PRESET CHANNELS

- If you have already preset some channels, do not use the automatic Channel Search function to change or add channels. ☞ p.37.

Notes:
- If you don't want to store the broadcast detected in Step B, simply press SEARCH to continue automatic scanning. Search will stop as soon as another broadcast is detected.
- Be sure to proceed to the next step within 10 seconds, otherwise Channel Search will be cancelled automatically. If this happens and you wish to continue channel setting, press SEARCH again. Channel scanning will resume, beginning with the next receivable channel.

MODE Mode Displays — What They Mean

Message Display Panel

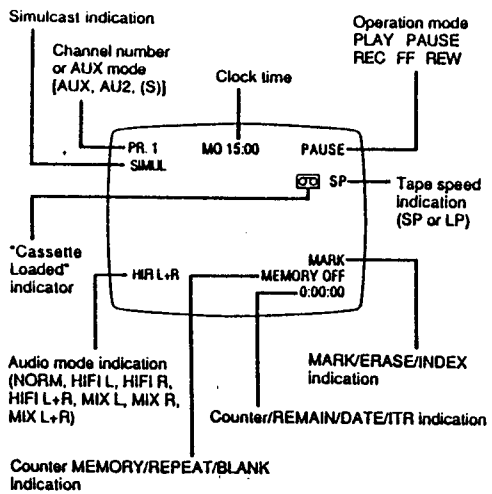
The operation mode is displayed on the recorder's display panel automatically. Displayed messages are designed to be self-explanatory. Here are some of the more common displays:

DISPLAY	MODE	DISPLAY	MODE
PLAY	Play	PAUSE (with channel number)	Record-Pause
STILL	Still	FWD SEARCH	Forward Search
FF	Fast-Forward	REV SEARCH	Reverse Search
REW	Rewind	FWD SLOW	Forward Slow
REC SP (with channel number)	Record	REV SLOW	Reverse Slow
TIMER REC	Timer-Recording	EJECT	Eject

For a more comprehensive list, ☞ p.40.

On-Screen Display

Operation modes (except PAUSE) are displayed on the TV screen only when the On-Screen Display function is set to ON. ☞p.16.



AUTOMATIC INDICATION

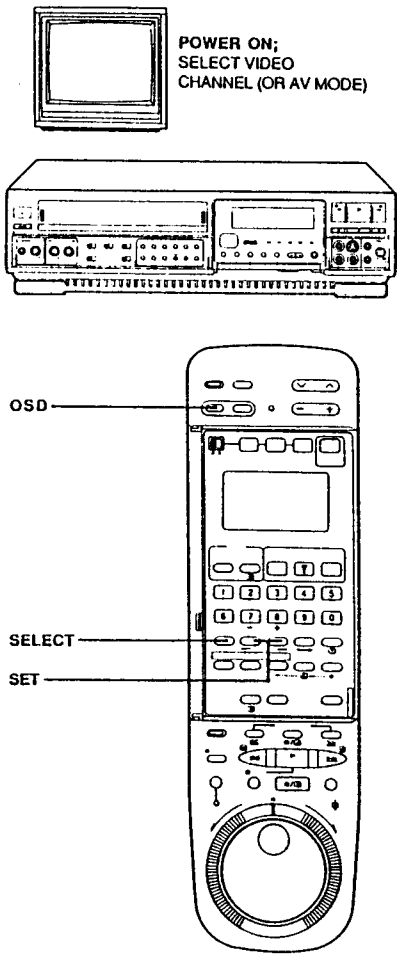
- **Channel, operation mode, audio mode, simulcast indication and "Cassette Loaded" mark**
  When the status is changed, the corresponding indication is displayed on the screen for 5 seconds. The PAUSE mode indication, however, is displayed for as long as the Pause mode is engaged.
- **Time and date**
  When time setting is completed, time and date are displayed for 5 seconds.

MANUAL RECALL

1 Press OSD (On-Screen Display).
- All indications corresponding to the current status is displayed for 5 seconds, leaving the counter information (counter, REMAIN or DATE) on the screen.
- To check only the counter information, press DISPLAY.

2 Press OSD to clear the counter display.

VCR On-Screen Set Up



Language Select

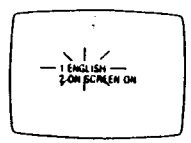
Although the preset on-screen language is English, you can set your video recorder to display on-screen messages in a choice of 10 languages.

A TURN ON THE RECORDER

1 Press OPERATE.

B ACCESS THE LANGUAGE SELECT MODE

2 Press OSD for longer than 2 seconds.
- The current language and On-Screen ON/OFF status are displayed on the screen.
- The displayed language blinks.



C SELECT THE LANGUAGE

3 Press SET + or – until your desired language is displayed.
- Available languages are: ENGLISH, DEUTSCH, FRANCAIS, ITALIANO, ESPANOL, NEDERLANDS, SVENSKA, NORSK, SUOMI, and DANSK, in the order they are called up.

4 Press OSD while the language is blinking.
- Now all on-screen messages will be displayed in the selected language.

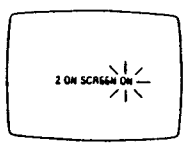
On-Screen Display Function ON/OFF

If you do not want on-screen displays, the function can be cancelled.

1 Press SELECT after step 2 above.
- The On-Screen ON/OFF status is displayed.

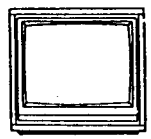
2 Press either SET button.

3 Press OSD while the status is blinking.
- Even with the function set to OFF, "PAUSE" is displayed for as long as the Pause mode is engaged. Of course, on-screen timer programming is not affected either.

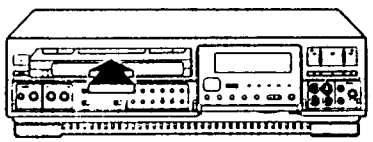


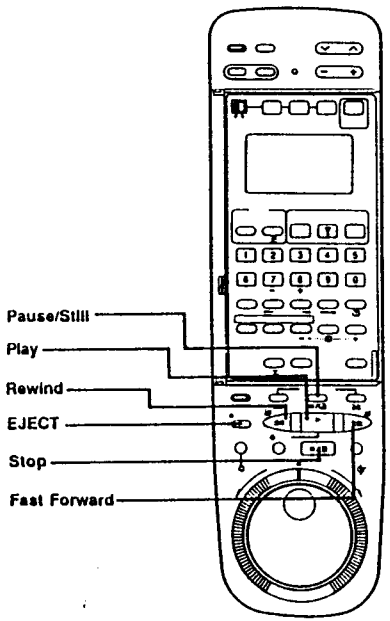
Playback

The easiest, most basic operation possible with your video recorder is tape playback. Already-recorded signals on a video tape are read by your video recorder and displayed on your TV just like a TV programme.



POWER ON;
SELECT VIDEO
CHANNEL (OR AV MODE)





A LOAD A CASSETTE

1 Insert a cassette.
- The recorder power will come on automatically.
- If the safety tab on the cassette is removed, playback will start automatically.

B TO START PLAYBACK

2 Press ► (Play).

C TO STOP PLAYBACK

3 Press ■ (Stop).

D TO REWIND OR FAST-FORWARD

4 Press ◄◄ (Rewind) to rewind the tape.
5 Press ►► (Fast Forward) to fast-forward the tape.
- Press ■ (Stop) to stop rewind or fast-forward.

E TO EJECT THE TAPE

6 Press EJECT.

High-Speed Forward And Reverse Search

During Playback:
1 Press ►► (Fast Forward) for high-speed forward search.
2 Press ◄◄ (Rewind) for high-speed reverse search.
3 Press ► (Play) to resume normal playback.
- For short searches, keep ►► (Fast Forward) or ◄◄ (Rewind) pressed for more than 2 seconds. When released, normal playback will continue.

Still Playback And Frame Advance

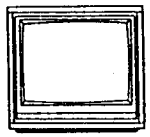
During Playback:
1 Press ❚❚ (Pause/Still) to view a still picture.
2 Press again to advance the picture frame by frame.
3 Press ► (Play) to resume normal playback.

NOTES:

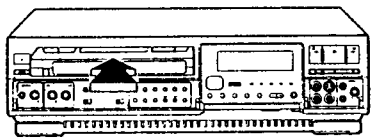
- Tapes with monaural soundtracks (normal audio) are automatically played back in the NORM mode. When playing back tapes with Hi-Fi stereo, dual-audio, or audio-dubbed soundtracks, ☞p.24.
- The recorder automatically stops when still continues for more than 5 minutes.
- If the still picture is unstable (vertical jitter) use the recorder's V. LOCK buttons to correct the picture.
- During search playback, some noise bars will appear.
- If noise bars appear during playback, correct using manual tracking. ☞p.23.
- There is no audio during search, still, or frame-by-frame playback.
- The recorder automatically rewinds when the end of the tape is reached.

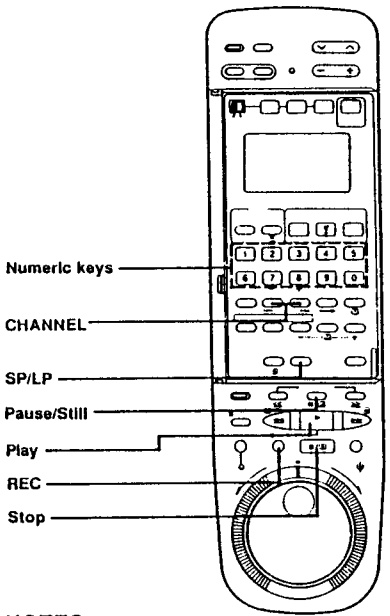
Recording

TV signals being received by the recorder's built-in tuner can be recorded onto a video tape. This is realtime video recording.



POWER ON;
SELECT VIDEO
CHANNEL (OR AV MODE)





A LOAD A CASSETTE

1 Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

B CHOOSE A PROGRAMME

2 Press CHANNEL or the numeric keys to select the channel you wish to record.

C SELECT THE TAPE SPEED

3 Press SP/LP.

D TO START RECORDING

4 Press ● REC (Record) and ► (Play) simultaneously.

E TO PAUSE RECORDING

5 Press ❚❚ (Pause/Still).
6 Press ► (Play) to resume recording.

F TO STOP RECORDING

7 Press ■ (Stop).

To Watch Another Programme While Recording

During Record:
1 Use the channel controls on the TV to select the other channel you wish to view.
- The programme selected with the TV channel controls will appear on the TV screen while the one selected with the video recorder's channel controls will be recorded on the tape.

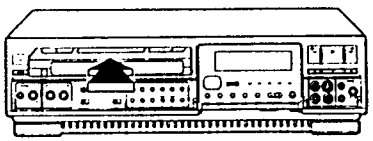
NOTES:

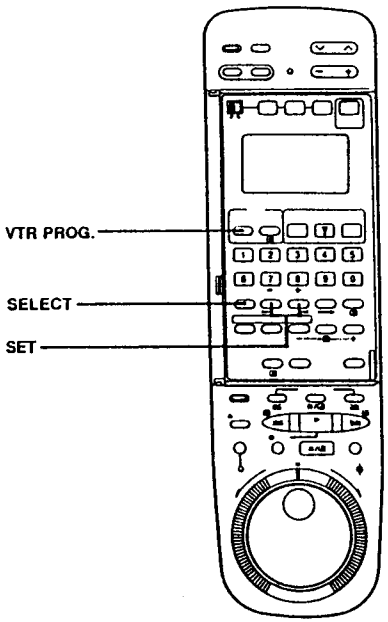
- To start recording with the recorder's REC/ITR button, press it once on its own. Pressing REC/ITR more than once activates the Off-Timer. ☞p.25.
- After pause, when recording is resumed, a few frames recorded before the pause may be overlapped by the new recording. This is meant to reduce picture distortion and is not a malfunction.
- The recorder automatically stops when record-pause continues for more than 5 minutes.
- If the Record button does not work, check to see if the cassette's safety tab has been removed.
- The channel cannot be changed while recording is in progress. To change the channel, engage the record-pause mode, then change the channel.
- The recorder automatically rewinds when the end of the tape is reached during recording.
- For stereo or dual-audio recording, ☞p.26.

Timer-Recording

The on-screen and LCD timer programming methods are introduced here. Both have different advantages. With on-screen programming, you can follow easy-to-see guides on your TV screen. With LCD programming, you can transfer the programmed data to the recorder anytime when necessary. If you prefer to use the recorder's controls and message display panel, ☞p.30. TIMER PROGRAMMING IS NOT POSSIBLE UNLESS THE CLOCK HAS BEEN SET.

POWER ON;
SELECT VIDEO CHANNEL(OR AV MODE)





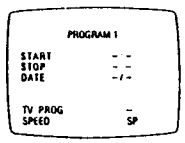
On-Screen Timer Programming

A LOAD A CASSETTE

1 Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

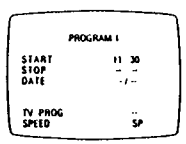
B ACCESS THE ON-SCREEN PROGRAM DISPLAY

2 Press VTR PROG.
- You are ready to input data into Program No. 1.
- To change the program number, press SET.



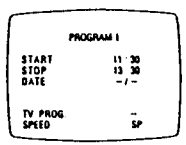
C INPUT THE START TIME

3 Press SELECT, and then SET to input the hour.
4 Press SELECT, and then SET to input the minute.



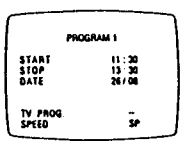
D INPUT THE STOP TIME

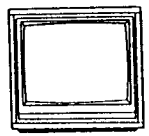
5 Press SELECT, and then SET to input the hour.
6 Press SELECT, and then SET to input the minute.

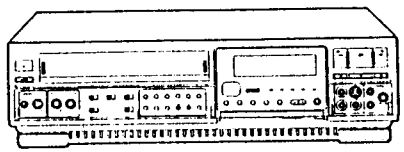


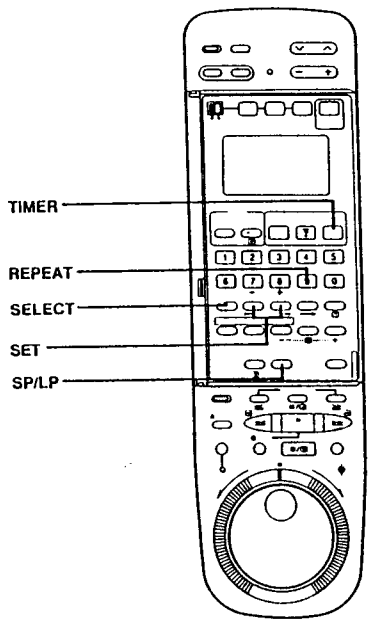
E INPUT THE DATE

7 Press SELECT, and then SET to input the day.
8 Press SELECT, and then SET to input the month.



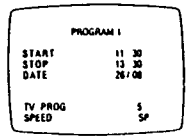






F INPUT THE CHANNEL NUMBER

9 Press SELECT, and then SET to input the channel.
- The screen colour changes to green.



G SELECT THE TAPE SPEED

10 Press SELECT, and then SP/LP.

H END ONE PROGRAM

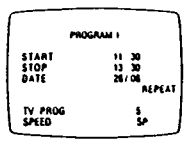
11 Press SELECT.
- The program number will blink.
- To make corrections, advance with SELECT to the item you wish to change and input new data with SET.
- If you need to set another program, press SET and repeat steps 3 through 11.

I SET TO TIMER MODE

12 Press TIMER.
- The recorder will enter the timer mode and power will go off.
- Press TIMER again to release the timer mode.

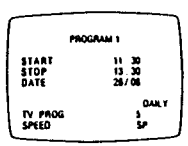
Variations In Step E (Weekly Program)

This function lets you set the recorder to timer-record at the same time on the same day every week. Use it to record weekly serials.
- First press REPEAT (numeric key "9") and then enter the date.

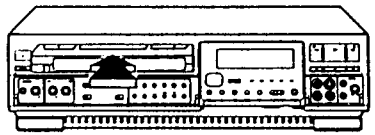


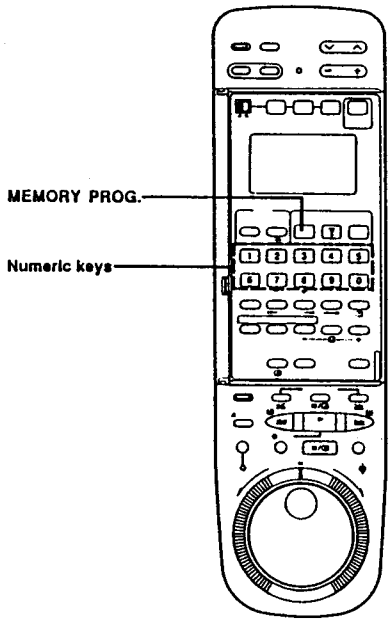
Variations In Step E (Daily Program)

This function lets you set the recorder to timer-record at the same time everyday. Use it to record daily serials.
- To record a daily serial starting on the day of setting, press REPEAT twice (numeric key "9") and then press SELECT.
- To record a daily serial starting on a certain day, press REPEAT twice and then enter the date.



Timer-Recording (Con't)





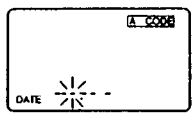
LCD Timer Programming

A LOAD A CASSETTE

1 Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

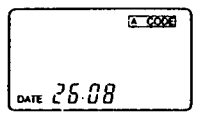
B ACCESS THE LCD TIMER PROGRAM

2 Press MEMORY PROG.



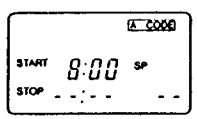
C INPUT THE DATE

3 Press the appropriate numeric keys.
- Example: For 26th August, press 2 6 0 8.



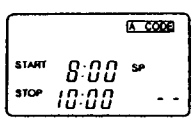
D INPUT THE START TIME

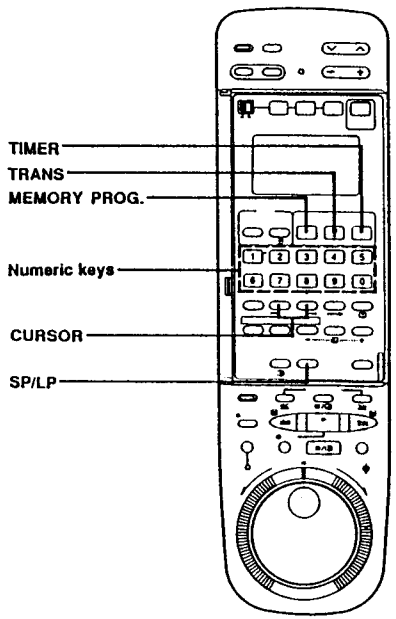
4 Press the appropriate numeric keys.
- Example: For 8:00, press 0 8 0 0.



E INPUT THE STOP TIME

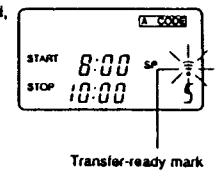
5 Press the appropriate numeric keys.
- Example: For 10:00, press 1 0 0 0.





F INPUT THE CHANNEL NUMBER

6 Press the appropriate numeric keys.
- Example: For channel 5, press 5.
- After the channel has been entered, the transfer-ready mark will appear and blink.



G SELECT THE TAPE SPEED

7 Press SP/LP.

H TRANSFER THE DATA TO THE RECORDER

8 Press TRANS with the remote control directed to the recorder's Remote Sensor window.
- You will see "PROGRAM 1" on the display panel, telling you that the data has been successfully transferred to the recorder's Program 1 memory.

I SET TO TIMER MODE

9 Press TIMER.
- The recorder will enter the timer mode and power will go off.
- Press TIMER again to release the timer mode.
- To return to the clock display, press MEMORY PROG.

Variations In Step C (Weekly Program)

This function lets you set the recorder to timer-record at the same time on the same day every week. Use it to record weekly serials.
- First press numeric key "9" (REPEAT) and then enter the date.

Variations In Step C (Daily Program)

This function lets you set the recorder to timer-record at the same time every day. Use it to record daily serials.
- To record a daily serial starting on the day of setting, press numeric key "8" (DAILY) and then press CURSOR → until the display changes to time input mode.
- To record a daily serial starting on a certain day, press numeric key "8" (DAILY) and then enter the date.

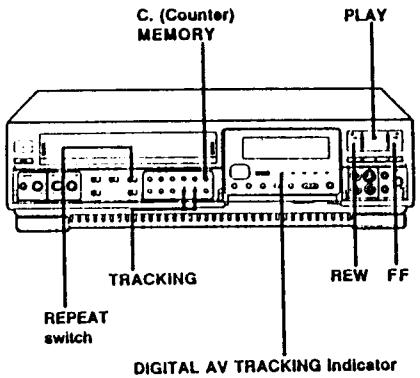
TO MAKE CORRECTIONS

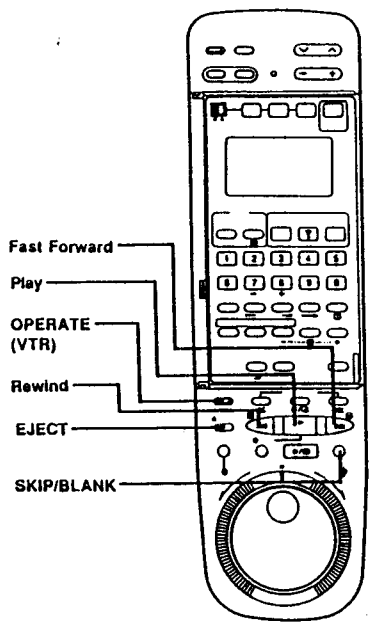
- Press either CURSOR button so that the item you want to change blinks, and enter new data.

For other timer programming methods, ☞ p.30.
Any questions? ☞ p.31.

For Playback

Take advantage of special functions possible with the recorder's controls or the remote control.





NOTE:
When a new tape is inserted, the recorder enters the automatic tracking mode automatically.

Repeat Playback (Recorder)

Your video recorder can automatically play back the whole tape or an index-marked portion 5 times repeatedly.
1. Set the REPEAT switch to FULL or INDEX.
2. For Index Repeat playback, locate the index code at which you wish to start playback. (Index Search, ☞p. 29.)
3. Press PLAY. Repeated playback will start. After repeating 5 times consecutively, playback will stop.
   - Be sure to reset the REPEAT switch to OFF before pressing the PLAY button again; otherwise repeat playback will resume.

Manual Tracking (Recorder)

Your video recorder is equipped with automatic tracking control; the DIGITAL AV TRACKING indicator lights or blinks when automatic tracking is on. If you wish to adjust tracking manually during playback:
1. Press TRACKING (+ and –) simultaneously for manual override.
   - The DIGITAL AV TRACKING indicator will go out.
2. Press TRACKING (– or +) to adjust tracking when required.
3. Press TRACKING (+ and –) simultaneously to return to automatic tracking.

To adjust tracking during slow motion, simply press TRACKING (– or +) to obtain the best picture.

Memory Play (Recorder and Remote Control)

For automatic start of playback after tape is rewound:
1. Press ◄◄ (Rewind).
2. Press ► (Play) within 2 seconds.

For automatic power off after tape is rewound:
1. Press ◄◄ (Rewind).
2. Press OPERATE (VTR) within 2 seconds.

Memory Play (Recorder)

For automatic start of playback beginning at counter position "0:00:00":
1. Press C. MEMORY.
2. Press REW (or FF).
3. Press PLAY within 2 seconds.

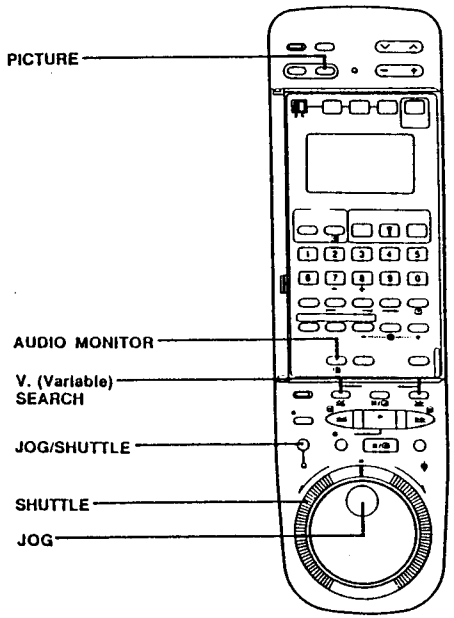
Memory Eject (Recorder and Remote Control)

For automatic tape eject after tape is rewound:
1. Press ◄◄ (Rewind).
2. Press EJECT within 2 seconds.

Skip Search (Remote Control)

Your recorder offers a simple way of skipping over unwanted sections of recorded TV programmes.

During Playback:
1. Press SKIP/BLANK from 1 to 4 times.
   This fast-motions through 30-sec. to 2-min. of tape.
   - Playback resumes automatically.
   - Press ► (Play) to cancel a Skip Search midway.



Soundtrack Selection

Your video recorder is capable of recording three soundtracks (HIFI L, HIFI R and NORM) simultaneously, and playing back the selected soundtrack.
- Pressing Hi-Fi/NORM/MIX (on the recorder) changes the track:

  HIFI → NORM → MIX

- Pressing AUDIO MONITOR (on the recorder and remote control) changes the channel:

  L+R → L → R

Usual settings
HIFI L + R: for Hi-Fi stereo tapes
HIFI L or HIFI R: for dual-audio tapes
MIX L + R : for audio-dubbed tapes

NOTE:
Normally use the HIFI L + R position. Then Hi-Fi stereo tapes are played back in stereo, and tapes with normal audio only are played back automatically in the NORM mode.

Variable-Speed Search, Slow Motion, And Jog Control (Remote Control)

You can view pictures in slow to fast motion, or frame-by-frame, in either direction.

During Play or Still:
1. Press JOG/SHUTTLE.
   - The LED indicator will light.
2. Turn the outer ring (SHUTTLE) in either direction. The farther the ring is rotated, the faster the search speed. Releasing the ring stops the picture in the Still mode.

or

1. Press either V.SEARCH button. Tape will move in the corresponding direction.
   - The more times the button is pressed, the faster the search speed.
   - To decrease speed, press the button for the opposite direction.

During Still:
1. Make sure that the LED indicator is lit.
   - If not, press JOG/SHUTTLE.
2. Turn the inner dial (JOG) in either direction for jog control. The tape moves forward or backward frame-by-frame at the speed with which the dial is turned.

To resume normal playback, press ► button.

Picture Control

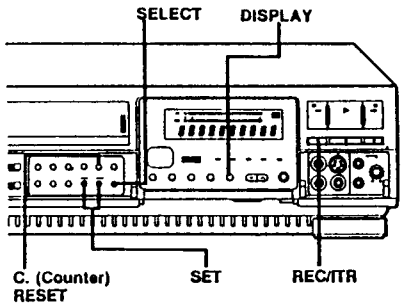
Your video recorder has a built-in video processor that lets you choose the type of playback picture that's best for any given application.

During Play:
1. Press PICTURE as many times as required to reach the desired setting.
   - The display panel shows the setting for 5 seconds.

Display Panel	When To Use
ENHANCED	When viewing tapes with noise due to repeated playback, such as rental videos.
TAPE DUB	When editing to another recorder.
SOFT PIC	When you want a soft picture.
SHARP PIC	When you want a sharp picture.
OFF	When no modification is required.

NOTES:
- If noise bars appear during slow motion, correct using manual tracking. ☞ p.23.
- During variable-speed search, some noise bars will appear.
- When playing back LP recordings in the search, still, or frame-by-frame playback mode, the picture will be distorted, and there may be a loss of colour.

For Recording

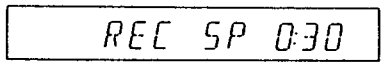


Instant Timer Recording (Off Timer) (Recorder)

You can start a recording and then set the recorder to shut off automatically after a set duration.

During Record:

1. Press REC/ITR (on the recorder). A "REC SP 0:30" or "REC LP 0:30" indication appears, advising that power will switch off after 30 minutes.



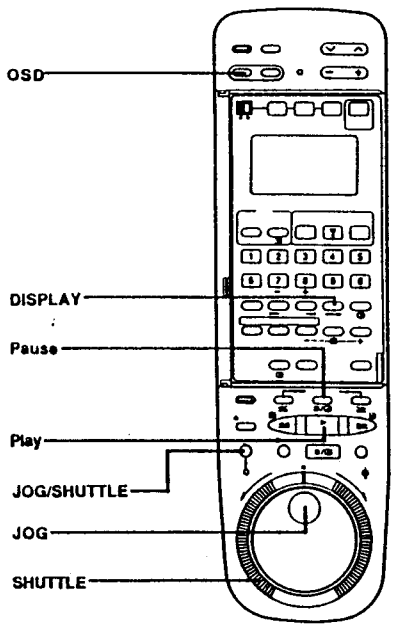
   - "ITR 0:30" will be displayed on the TV screen.
2. Press REC/ITR again to delay the off-time by 30-minute increments (up to 4 hours).
   - For a more precise setting, use the SELECT/SET buttons to set the exact time required (possible up to 8 hours and 59 minutes).

Retake (Remote Control)

You can cut out unwanted parts of a TV programme while you're recording it.

During Record:

1. Press ⏸ (Pause).
2. Press JOG/SHUTTLE.
   - The LED indicator will light.
3. Turn the JOG dial or SHUTTLE ring in either direction to locate the beginning of the unwanted part.
   - Release the dial or ring to return to the Record-Pause mode.
4. Press ▶ (Play) when you wish to resume recording.

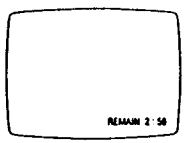


Remaining Tape Time Indication

(Recorder and Remote Control)

When you need to know the tape's remaining time.

1. Press DISPLAY until "REMAIN" appears on the screen. Approximate remaining tape time is displayed.
2. To clear the screen, press OSD.
   - The display panel also shows remaining tape time, but, during recording, changes back to the "REC" mode display after 5 seconds.

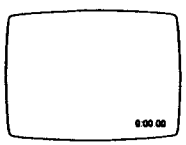


Elapsed Recording Time Indication

(Recorder and Remote Control)

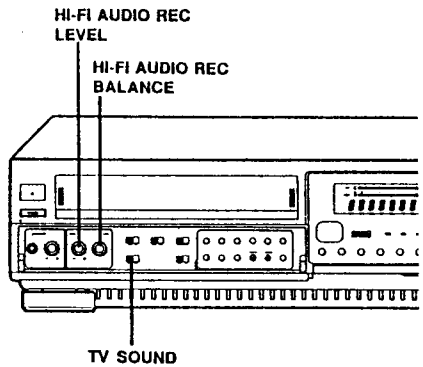
When you need to know the exact time of a recording.

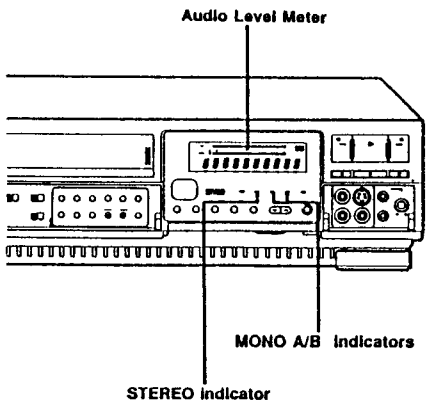
1. Press DISPLAY until a counter reading appears on the screen.
2. Press C. (Counter) RESET and then start recording.
   - The counter will be reset to "0:00:00", and show the elapsed time as the tape runs.
   - The display panel also shows a counter reset to "0:00:00", but is replaced by the Record mode display.
3. To clear the screen, press OSD. And press DISPLAY anytime when you want to check the elapsed recording time.



NOTES:

- With Retake, rainbow noise may occur in the rewound and re-recorded section. Retake in the LP mode is not recommended.
- The remaining time is inaccurate while the display is blinking. When blinking stops, the remaining time is shown.





Hi-Fi Audio Recording Level Control

In most cases, setting the ALC switch to ON will provide satisfactory results. If necessary, after setting the ALC switch to OFF, you can adjust the Hi-Fi audio recording level more precisely by referring to the audio level meter above the message display.

- Turn the Hi-Fi AUDIO REC BALANCE control to adjust the balance between left and right channels.
- Turn the Hi-Fi AUDIO REC LEVEL control to adjust the level. When the level meter lights up to or near 0 dB with the loudest signal being applied, the recording level is optimum.

NOTES:

- Make sure that the "HIFI L + R" position is selected with the AUDIO MONITOR button. ☞p.24.
- Noise will increase if the recording level is too low, while distortion will increase if the level is too high.

NICAM Stereo And Dual-Audio

Your recorder is equipped with a Digital stereo sound decoder for reception of NICAM stereo and dual-audio broadcasts.

- When a NICAM broadcast is being received, the STEREO indicator lights.
- When a dual-audio programme is being received, the MONO A and MONO B indicators light.

To Record NICAM Stereo Programmes

Stereo programmes are recorded on the Hi-Fi audio track by setting the TV SOUND switch to NICAM.

- To listen to the stereo soundtrack while recording, select "HIFI L+R" with AUDIO MONITOR. ☞p.24.

To Record NICAM Dual-Audio Programmes

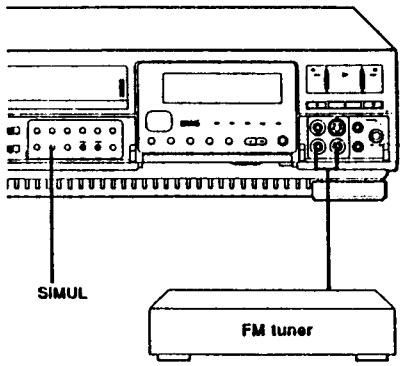
Dual-audio programmes are recorded on the Hi-Fi audio track by setting the TV SOUND switch to NICAM.

- To listen to the Hi-Fi soundtrack during recording, select "HIFI L" for A, and "HIFI R" for B.
- To listen to the normal soundtrack, select "NORM".

NOTES:

- Although the STEREO indicator lights whenever a NICAM broadcast is received, some of these programmes may not be in stereo.
- Dual audio programmes are not yet broadcast, therefore the MONO A and B indicators will not light.

For Recording (cont'd)



Simulcast Recording

Your recorder lets you record an audio programme while recording a TV programme. In the Simulcast mode, the TV soundtrack is recorded on the normal audio track and the external audio programme is recorded on the Hi-Fi audio track, so you can have two independent programmes. If FM simulcast TV programmes are available, record the TV programme and its FM-broadcast soundtrack simultaneously.

PREPARATION

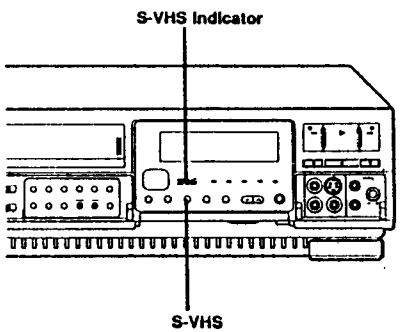
1. Connect the FM tuner to the rear panel AUDIO IN or front panel INPUT L and R connectors.
   - Front panel connections have priority.
2. Set the FM tuner to the desired broadcast.

PROCEDURE

1. Select the TV programme you wish to record.
2. Press SIMUL. The SIMULCAST mode will be engaged.
3. Start recording.

NOTES:

- If you stop recording with the PAUSE/STILL button to avoid unwanted TV programme material, the audio programme is also cut.
- After finishing simulcast recording, be sure to press the SIMUL button to cancel the Simulcast mode, otherwise it is not possible to record on the Hi-Fi track from the built-in tuner.

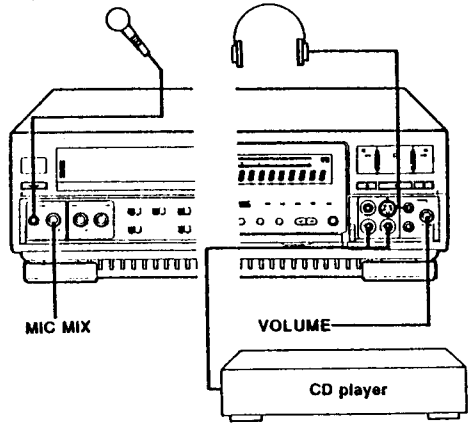


S-VHS And VHS

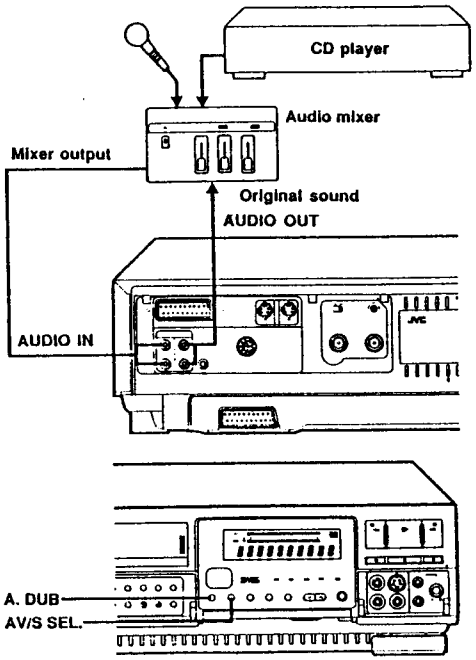
Your video recorder can record in either S-VHS or VHS.

- To record in S-VHS, insert a cassette marked "S-VHS". The S-VHS indicator will light and the S-VHS recording mode is automatically selected.
- To record in VHS, insert a cassette marked "VHS". The VHS recording mode is automatically selected.
- You can also record in VHS on S-VHS cassettes. For this purpose, after inserting an S-VHS cassette, press the S-VHS button. The S-VHS indicator will go out.

Simple audio dubbing



With audio mixer



Audio Dubbing

Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack. Add your personal touch by recording commentary, etc.

PREPARATION

1. Connect a microphone to the MIC jack.
2. Select the AUX INPUT 2 mode. (First engage the AUX INPUT mode with CHANNEL or the remote's "0" key, then press AV/S SEL.)
   - If you wish to use audio sources other than microphone input, connect the audio equipment to the front panel INPUT L and R connectors. (For monaural equipment, use the L connector.) Then select the FRONT AV mode (with CHANNEL or the remote's "0" key). If both the microphone and another audio source are connected, mixed recording is possible in the FRONT AV mode.

PROCEDURE

1. Adjust the input level with the MIC MIX control.
2. Play back the tape to search for a scene at which you wish to begin audio dubbing.
   - After pressing the JOG/SHUTTLE button on the remote control unit, turn the SHUTTLE ring in either direction to quickly locate the desired scene. Simply release the SHUTTLE ring, and the Still mode will be engaged automatically.
   - Then turn the JOG dial for more precise location of the audio dubbing start point.
3. Press the A. DUB button while in the Still mode.
4. Press the PLAY button.
   - Audio dubbing will start.
5. Press the PAUSE/STILL button to stop audio dubbing temporarily.

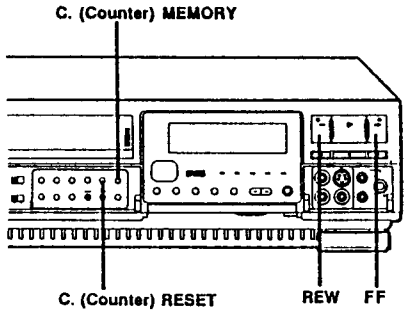
NOTES:

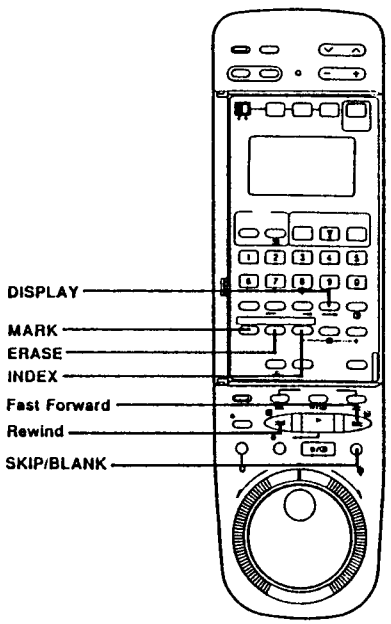
- Audio dubbing will stop automatically at the counter reading of "0:00:00", and the recorder will enter the Play mode. Check the counter before starting audio dubbing.
- Audio dubbing is also possible with input via the rear panel AV1 IN/OUT, AV2 IN, or AUDIO IN. In these cases, select the appropriate input mode:
  With AV1 IN/OUT, select the AUX INPUT mode.
  With AV2 IN, select the AUX INPUT 2 mode.
  With AUDIO IN, select the S-INPUT mode.
  Front panel connections have priority.
- If howling occurs, move the microphone away from the TV or reduce the TV sound volume. If necessary, monitor the sound with headphones.

NOTE:

- Audio dubbing is not possible with cassettes whose safety tab has been removed.

For Tape Access

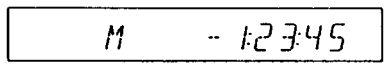




Counter Memory (Recorder)

During Playback:

1. Press C. RESET (with a counter reading on the display) at a point you wish to locate later.
   - The counter will read "0: 00: 00".
2. Press C. MEMORY.
   - "M" will appear in front of the counter digits.
   - "MEMORY ON" will be displayed on the TV screen.
3. When you wish to return to that point, press STOP and then press REW.
   - The tape will rewind and stop at about "0: 00: 00" automatically.



4. To cancel the Counter Memory mode, press C. MEMORY.

Index Search (Remote Control)

This function gives you quick access to any one of 9 index codes in either direction. Your recorder automatically marks index codes at the beginning of each recording. You can manually mark and erase index codes as well.

During Playback or Stop:

1. Press INDEX. "INDEX 1" will be displayed on the screen.
   - If you wish to access index codes 2 through 9, press INDEX repeatedly until the correct index number is displayed.
2. Press ►► (Fast Forward) or ◄◄ (Rewind). Index Search will start in the corresponding direction.

Manual Index Mark/Erase (Remote Control)

TO MARK

During Playback or Record:

1. Press MARK. The recorder will mark an index code at that location.

TO ERASE

During Playback or Still:

1. Press ERASE. The recorder will fast-forward to the nearest index code and delete it.

Blank Search (Remote Control)

This function lets you quickly locate the blank portion of a partially recorded tape.

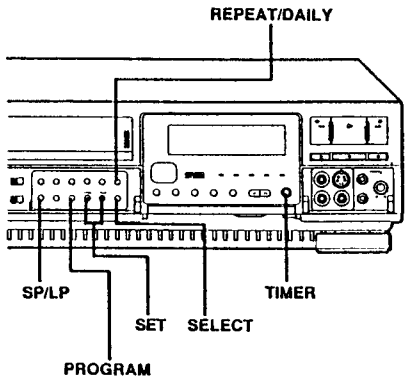
During Stop:

1. Press SKIP/BLANK.
   - The recorder automatically fast-forwards or rewinds to the end of the recorded portion of tape, and stops.
   - The tape's remaining time is automatically displayed. Press DISPLAY to return to the realtime counter display.

NOTES:

- Index codes cannot be marked or erased if the cassette's safety tab is removed. ☞ p.12.
- Press ► (Play) or ■ (Stop) to cancel Index Search or Blank Search.
- If the end of the tape is reached during Index Search or Blank Search, the mode is cancelled and the tape is rewound to the beginning.
- When a fully recorded tape is used for re-recording new material, Blank Search can be used to detect the end of the new material.

For Timer-Recording



Things You Should Know

Timer-recording is one of the most useful functions of your video recorder, and, if you don't understand it, it can be one of the most complicated too. This chapter describes the method of programming the timer directly with the recorder's controls, and how the message display helps you in timer recording. Please read the following to get a clear idea about why things work the way they work, and what you should do when things don't work as expected.

Direct Timer Programming

The built-in 1-year/8-event programmable timer can be set directly at the recorder, referring to the message display panel. Make sure that the message display panel shows the correct current time.

A LOAD A CASSETTE

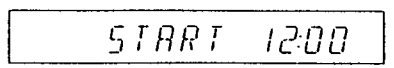
1. Insert a cassette with the safety tab in place.
   - The recorder power will come on automatically.

B ACCESS THE TIMER PROGRAM

2. Press PROGRAM.
   - You are ready to input data into Program No. 1.
   - To change the program number, press SET.

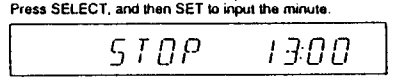
C INPUT THE START TIME

3. Press SELECT, and then SET to input the hour.
4. Press SELECT, and then SET to input the minute.



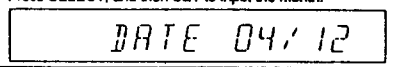
D INPUT THE STOP TIME

5. Press SELECT, and then SET to input the hour.
6. Press SELECT, and then SET to input the minute.



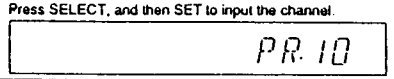
E INPUT THE DATE

7. Press SELECT, and then SET to input the day.
8. Press SELECT, and then SET to input the month.



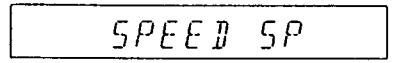
F INPUT THE CHANNEL NUMBER

9. Press SELECT, and then SET to input the channel.



G SELECT THE TAPE SPEED

10. Press SELECT and then SP/LP.



H END ONE PROGRAM

11. Press SELECT.
    - The current program number will appear and blink.
    - To make corrections, advance with SELECT to the item you wish to change and input new data with SET.
    - If you need to set another program, press SET and repeat steps 3 through 11.

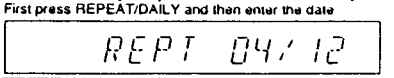
I SET TO TIMER MODE

12. Press TIMER.
    - The recorder will enter the timer mode and power will go off.
    - Press TIMER again to release the timer mode.

Variations in Step E (Weekly Program)

This function lets you set the recorder to timer-record at the same time on the same day every week. Use it to record weekly serials.

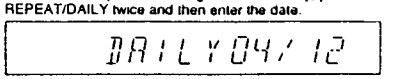
- First press REPEAT/DAILY and then enter the date



Variations in Step E (Daily Program)

This function lets you set the recorder to timer-record at the same time everyday. Use it to record daily serials.

- To record a daily serial starting on the day of setting, press REPEAT/DAILY twice and then press SELECT until the display changes to channel setting mode.
- To record a daily serial starting on a certain day, press REPEAT/DAILY twice and then enter the date.



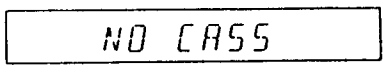
NOTE:

The REPEAT/DAILY button rotates the date set mode among DATE, REPT, and DAILY.
*VPS adapter is required on "E" version.

For Timer-Recording (cont'd)

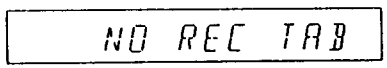
Error Messages

The following error messages may appear on the message panel when you press the TIMER button to engage the Timer Standby mode. Here's why, and what you should do.



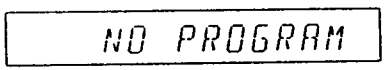
- Displayed for 5 seconds and the Timer Standby mode is cancelled.

WHY: There is no cassette in the recorder.
WHAT TO DO: Insert a cassette. Press TIMER again.



- Displayed for 5 seconds. The Timer Standby mode is cancelled.

WHY: The inserted cassette has its safety tab removed.
WHAT TO DO: Eject that cassette. Insert a cassette with its safety tab intact. Or cover the safety tab hole of the cassette with adhesive tape and re-insert it. Press TIMER again. ☞p.12.

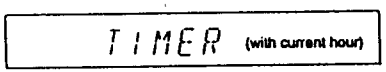


- Displayed for 5 seconds. The Timer Standby mode is cancelled.

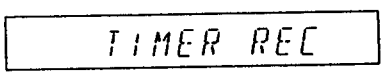
WHY: There are no preset programs in memory.
WHAT TO DO: Check the programmed data and re-program it as necessary. Press TIMER again.

Other Messages

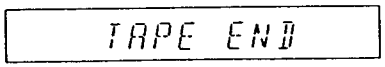
The following messages may also be encountered during timer-recording.



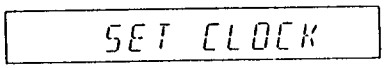
WHY: The recorder is in the Timer Standby mode. This is the normal display you should see when you press the TIMER button.



WHY: Normal display while timer-recording is in progress.



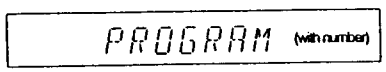
WHY: If this and "TIMER REC" are alternately displayed, it means that the end of the tape was reached while timer-recording was in progress. Therefore, the preset program may not be recorded in its entirety.



WHY: This means the clock must be set. It's displayed when time-keeping is terminated due to a power failure or because the recorder's power plug was pulled from the AC outlet.
WHAT TO DO: Set the clock. ☞p.13.

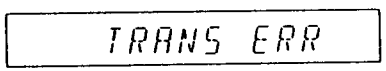
- If power was interrupted, it's also likely that all preset timer programming data has been erased. Please check and re-program as necessary.

The following messages may be encountered when the TRANS button of the remote control is pressed. ☞p.22.



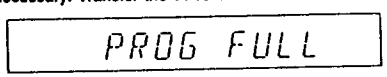
- Displayed for 5 seconds.

WHY: The transferred data has been stored in that program number. (The smallest vacant program number is always selected automatically.)



- Displayed for 5 seconds.

WHY: Data was not successfully transferred. The program may have been incorrectly preset, or the recorder's clock has not been set.
WHAT TO DO: Check the LCD program, and re-program as necessary. Transfer the correct data.



- Displayed for 5 seconds.

WHY: All the recorder's timer programs (1 – 8) are preset.
WHAT TO DO: Cancel unnecessary programs, and transfer again.

On Checking And Cancelling Programs

Since executed programs are automatically cleared from memory (except those for daily and weekly serials), cases where the entire 8-event memory is full should be rare. If this should happen, check the preset programs and cancel one or more to make room for the new program(s) you wish to input.

TO CANCEL A PROGRAM

1. Press PROGRAM.
   - Program 1 is displayed with the number blinking.
2. Press SELECT to review the program contents in succession.
3. Press CANCEL to erase the program from memory.
   - You can press CANCEL at any stage while the program is open. .
   - To erase another program, press SET when a blinking program number is displayed.

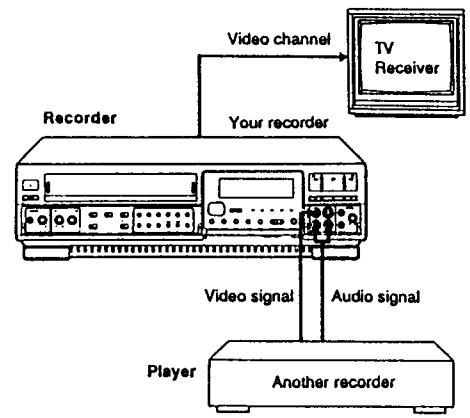
NOTE:

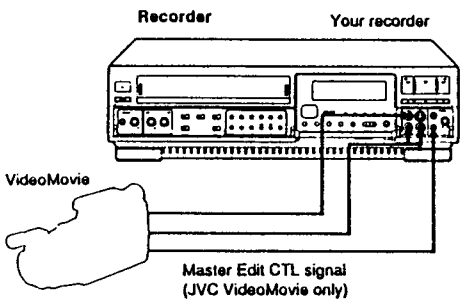
Cancelling programs is also possible using the remote control and on-screen display. Press VTR PROG. and check the program contents on the screen using SELECT and SET. Press VTR CANCEL while an unnecessary preset program is on the screen.

Some Facts On Timer Operation

- If the end of the tape is reached during timer-recording, the cassette is automatically ejected and recorder's power is switched off with "TIMER REC" and "TAPE END" flashing alternately on the message display panel.
- When timer-recording is successfully completed, the recorder's power is automatically switched off.
- Since the timer starts and stops recording based on the time being kept by the recorder's built-in clock, the clock's time must be accurate for correct timer-recording results.

For Editing





Editing From A VideoMovie

Tape-to-tape editing is also possible using a VideoMovie (equipped with playback facility) as the player and your recorder as the recording deck. In this case, the recorder's PAUSE terminal can be used to accept Master Edit Control commands from the VideoMovie.

PREPARATION

1. Connect the VideoMovie's AV OUT or AV/S OUT connector to the recorder's front panel INPUT connectors, using appropriate cables.
2. Connect the AV or AV/S output cable's mini-plug to the PAUSE terminal of the recorder.
3. Select the FRONT AV or FRONT <S> mode (TV PROGRAM or remote's "0" key for FRONT AV, then AV/S SEL. for FRONT <S>).
4. Select the TAPE DUB mode with the remote's PICTURE button. ☞ p.24.

NOTES:

- Use the L connector for monaural connection.
- You can also use the rear panel AV1 IN/OUT, AV2 IN, S IN/AUDIO IN connectors in combination with the rear panel PAUSE terminal.

Editing From Another Recorder

When used as a recording deck, your recorder can be connected to another recorder in five different ways. Choose the appropriate connection depending on the type of the other recorder.

PREPARATION

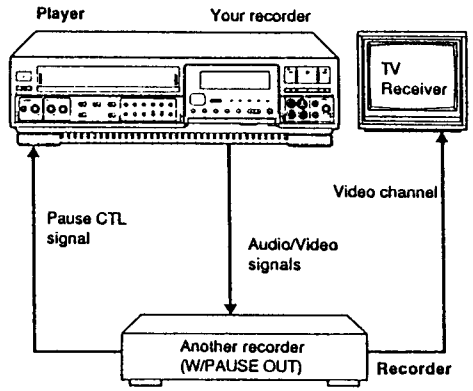
1. Connect another video recorder to:
   - rear panel AV1 IN/OUT, or
   - rear panel AV2 IN, or
   - rear panel S IN and AUDIO IN, or
   - front panel Video INPUT V, and Audio L, and R, or
   - front panel Video INPUT S, and Audio L, and R, whichever is most convenient.
2. Engage the external input mode.
   - With rear panel AV1 IN/OUT connection, select the AUX INPUT mode. (CHANNEL or remote's "0" key.) (On-screen display: AUX)
   - With rear panel AV2 IN connection, select the AUX INPUT 2 mode. (Press AV/S SEL. while in the AUX INPUT mode.) (On-screen display: AU2)
   - With rear panel S IN and AUDIO IN connection, select the S-INPUT mode. (Press AV/S SEL. while in the AUX INPUT 2 mode.) (On-screen display: (S))
   - With front panel INPUT V/L/R connection, select the FRONT AV mode. (CHANNEL or remote's "0" key.) (On-screen display: AUX)
   - With front panel INPUT S/L/R connection, select the FRONT <S> mode. (Press AV/S SEL. while in the FRONT AV mode.) (On-screen display: (S))
3. Select the TAPE DUB mode with the remote's PICTURE button. ☞ p.24.

NOTES:

- Use the L connector for monaural connection.
- Front panel connections have priority. Therefore, if something is connected to the front panel, "AUX INPUT", "AUX INPUT 2", or "S-INPUT" cannot be selected by pressing the AV/S SEL. button.
- The AV1 IN/OUT socket cannot accept Y/C signals from another S-VHS recorder.

OPERATION

4. Load the source tape in the player, and the recording tape in your recorder.
5. Select the recording speed (SP or LP).
6. Put your recorder in the Record-Pause mode.
7. Play back the source tape to search for a scene to be edited.
8. Press the recorder's PLAY button where you want to start editing.
9. Press the recorder's PAUSE button to stop editing.
10. Repeat steps 7 through 9 to continue editing.



Advantages Of S-VHS Video Recorders

You can edit from VHS to S-VHS, S-VHS to VHS, or, needless to say, from S-VHS to S-VHS.

- From VHS to S-VHS: Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS: Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS: All signals will be transferred without degradation

Editing To Another Recorder

When used as a source player in combination with another video deck which is preroll-capable and equipped with a Pause Control Output terminal, your recorder's PAUSE terminal can accept preroll commands for synchronized preroll editing. Moreover, thanks to your remote control's Jog/Shuttle controls, locating required scenes on the source tape will be very easy.

PREPARATION

1. Connect your recorder's AV1 IN/OUT or S OUT/AUDIO OUT to the audio and video input connectors of the recording deck.
2. Connect your recorder's PAUSE terminal to the recording deck's PAUSE OUT terminal (if provided).
3. Load the source tape in the player and the recording tape in the recorder.
4. Select the TAPE DUB mode with the remote's PICTURE button. ☞ p.24.
5. Engage the recorder's AUX mode.

OPERATION

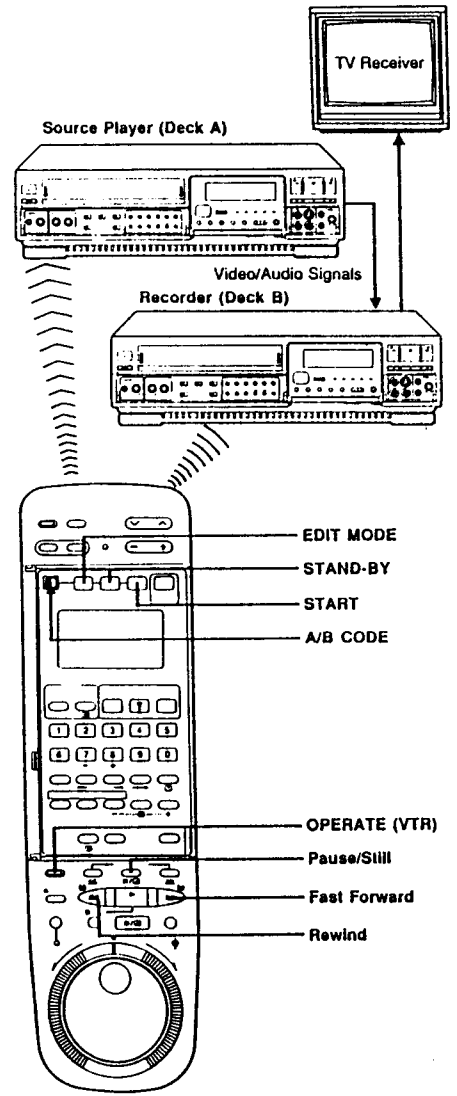
6. Put the recorder in the Record-Pause mode.
7. Play back the source tape to search for a scene to be edited.
   - After pressing the JOG/SHUTTLE button on the remote control unit, turn the SHUTTLE ring in either direction to quickly locate the desired scene. Simply release the SHUTTLE ring, and the Still mode will be engaged automatically.
   - Then turn the JOG dial for more precise location of the scene to be edited.
8. Press the recorder's PLAY button.
   - With PAUSE connection, both the player and the recorder will start in sync with each other.
   - Without PAUSE connection, you must press both the player's and recorder's PLAY buttons simultaneously.
9. Press the recorder's PAUSE button to stop editing.
10. Repeat steps 7 through 9 to continue editing.

NOTES:

- If you do not want to record on-screen messages on the edited tape, cancel the on-screen display. ☞ p.16.
- Suitable leads can be obtained from your dealer.

- Take advantage of Duet Editing for more convenient control of both the player and recorder. ☞ p.35.

For Editing (Cont'd)



CAUTION:
Some TV sets may malfunction in response to the B mode. If this happens switch back to the A mode.

Duet Editing

For those who have two JVC video recorders and are interested in editing, this function will simplify editing operations by delivering separate commands to two recorders simultaneously from a single remote control in the form of separate "A" and "B" control codes. (Designated JVC models only.)

PREPARATION

1. Connect two JVC recorders. (PAUSE connection not necessary.) ☞p.33.
2. Set one recorder to respond to A code signals (deck A), and the other to respond to B code signals (deck B). ☞"A/B Code Switching"
3. Place the two decks side by side.
4. Load a recorded tape into deck A, and a blank tape into deck B.
   - Make sure the clock of the remote control has been set.

OPERATION

5. Press the EDIT MODE button. ("EDIT" and "A — B" will appear on the LCD.)
   - If you are using deck B as player, and deck A as recorder, set the A/B CODE switch to B. "A — B" will be replaced with "B — A".
6. Press STAND-BY. Deck A enters Still mode, deck B enters Record-Pause mode.
7. Search for a scene you want to edit from deck A to deck B (only the tape in deck A will move) and press ❚❚ (Pause/Still).
8. Press START. Deck A enters Play mode, B enters Record mode.
9. Press ❚❚. Deck A enters Still mode, B enters Record-Pause mode.
   - Repeat steps 7, 8, and 9 to continue editing.
10. Press EDIT MODE to cancel the Duet Edit mode.

A/B Code Switching

The remote control is preset to send A code signals (indicated by " A CODE " on the LCD) because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1. Unplug the recorder's power cord from the AC outlet.
2. Set the A/B CODE switch to B. (" B CODE " will appear on the LCD.)
3. Plug the power cord back into the AC outlet. Do not use other remote controls at this stage.
4. Turn the recorder power on using the remote control's OPERATE (VTR) button. The recorder will now only respond to B code signals.

NOTE:
You can operate two recorders (A and B) independently from your remote control. Except in the Duet Edit mode, it will send either A or B code signals only, selected with the A/B CODE switch.

Special Operations

Setting The Recorder's Clock Directly

To set the recorder's clock, all you have to do is transfer the LCD clock data again (☞p.13). If you prefer to set or adjust the recorder's clock directly at the recorder, read on.

1. Press PROGRAM/CLOCK ADJ.
   - If you are only adjusting the time, the Timer Program mode will be engaged first. So press PROGRAM/CLOCK ADJ. again.
2. Press SET (+ or –) to input the hour.
3. Press SELECT, and then SET (+ or –) to input the minute.
   - If you are only adjusting the time, skip steps 4 – 6.
4. Press SELECT, then SET to input the day.
5. Press SELECT, then SET to input the month.
6. Press SELECT, then SET to input the year.
7. Press PROGRAM/CLOCK ADJ.

NOTES:
- If the day and month data is invalid (such as 31st April), the month digits are cleared automatically and the day digits will blink. Input again.
- If the year digits are automatically cleared when the PROGRAM/CLOCK ADJ. button is pressed in step 7, it is possible that you have input 29th February for a non-leap year. The day digits will blink. Input again.

Setting The Clock Forward Or Backward By One Hour (Daylight Saving Time Adjustment)

This adjustment can be done independently for the LCD clock and the recorder's clock.

TO ADVANCE THE TIME BY ONE HOUR

- Press SUMMER TIME ADJ. (ADJUST) and quickly release.

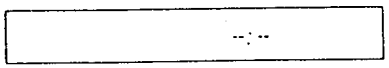
TO SET THE TIME BACK BY ONE HOUR

- Keep SUMMER TIME ADJ. (ADJUST) pressed for more than 2 seconds.

Turning Off The Display

The fluorescent display on your JVC recorder can be switched off at any time.

1. Press the DISP. OFF button on the recorder. The lights in the display will go out.

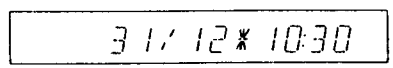


2. To restore the display, press the DISP. OFF button again.

Locking The Recorder's Controls

To avoid unwanted operation and prevent accidental recording or other interference, use the Child Lock function.

1. Press the remote control's OPERATE (VTR) button to turn the recorder's power off. Keep this button pressed for about 2 more seconds after the power LED indicator has gone off.
   - The Child Lock indicator (🔒) will appear between the date and time on the display panel.



2. Child Lock is automatically deactivated when you switch the recorder's power on again with the remote's OPERATE (VTR) button.
   - Pressing the TIMER button during timer-recording also deactivates the Child Lock mode.

NOTES:
- While the Child Lock mode is engaged, make sure you keep your remote control in a safe place inaccessible to children.
- Timer-recording is possible in the Child Lock mode. After timer-recording has been performed, the Child Lock mode remains in effect.

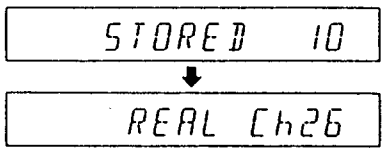
Special Operations (cont'd)

Changing Preset Channels

TO CHECK STORED REAL CHANNELS

This is possible both at the recorder and with the remote control. First turn on the recorder.

1. Press CHANNEL to select the channel position of the stored real channel whose number you want to know. (e.g. PR. 10)
2. Press CH SET.



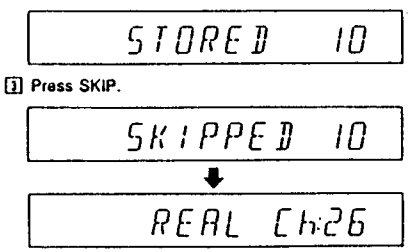
- This indicates that channel position 10 stores real channel 26.

3. To check other channel positions, press CHANNEL.
   - Either "STORED xx" or "SKIPPED xx" will appear, followed by "REAL Ch xx".
4. The Channel Set mode will be cancelled in about 10 seconds unless you call up another channel position.

TO DELETE STORED CHANNELS

Use the recorder's controls. First turn on the recorder.

1. Press CHANNEL to select the channel position you want to skip. (e.g. PR. 10)
2. Press CH SET.



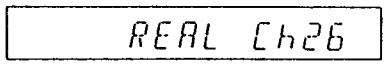
3. Press SKIP.

- This indicates that real channel 26 has been deleted from channel position 10.

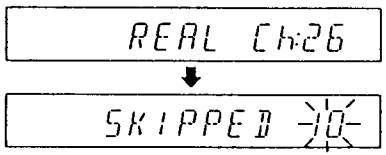
TO STORE NEW CHANNELS

Use the remote control since its 10 numeric keys can access real channels and channel positions directly. First turn on the recorder.

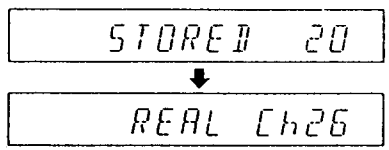
1. Press CH.



2. Press CH. again and keep it pressed until the real channel number starts blinking.
3. Press numeric keys to input the number of the real channel you want to store. (e.g. Ch 26.)



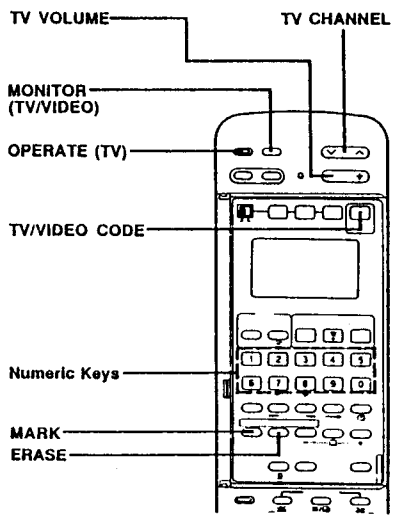
4. Press numeric keys to input the number of a vacant channel position (e.g. 20), and hold the key for the 2nd entry until the display changes to "STORED 20".



- The Channel Set mode will be cancelled automatically after about 10 seconds.

Using The Remote Control For TV Operation

The provided remote control can operate the basic functions of your television. In addition to JVC televisions, other manufacturers' televisions listed here can also be controlled by setting the remote control to the corresponding TV code. The remote control's default code is "1", which enables control of most JVC televisions without re-setting. If your JVC television is equipped with 10+ and 20+ buttons on its remote control, you have to set the TV code to "9".



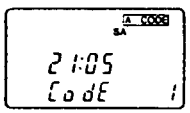
CODE	TV BRAND NAME
1	JVC
2	GRAETZ ITT LUXOR SALORA SELECO
3	BRANDT NORDMENDE SABA TELEAVIA TELEFUNKEN THOMSON
4	FERGUSON
5	PHILIPS
6	BLAUPUNKT GRUNDIG
7	SONY
8	PANASONIC
9	JVC

IMPORTANT

Although the provided remote control unit is compatible with JVC televisions, as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV, or in some instances, will have limited function capability.

Setting The TV Code

1. Press TV/VIDEO CODE for longer than 2 seconds.
   - The LCD will show the current code (initially "Code 1").
2. Press a numeric key corresponding to the code number for your TV's brand.
   - The LCD will return to the clock mode after 2 seconds.



NOTES:

- TV code setting is not possible unless the clock has been set.
- Whenever you replace batteries in the remote control or initialise the LCD memory (☞p.6), it is necessary to re-set the TV code, if your television is not a Code 1 JVC TV.

To Control Your Television With Buttons Exclusively For TV

- Press OPERATE (TV) to turn the TV power on.
- Press MONITOR (TV/VIDEO) to switch the TV between TV and VIDEO (or AV) mode.
- Press TV CHANNEL to select the TV's channel.
- Press TV VOLUME to adjust the TV's sound volume.

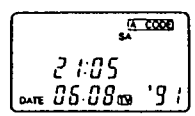
NOTES:

- The TV CHANNEL button does not function with televisions using Code 3.
- The MONITOR (TV/VIDEO) button does not function with televisions using Code 4.
- With some televisions, the OPERATE (TV) button functions only to turn the TV power off, and the MONITOR (TV/VIDEO) button functions only to switch the TV to the VIDEO (AV) mode.

To Control Your Television With Additional Buttons

The numeric keys can also be used to select the TV's channel by setting the remote control to the TV mode.

1. Press TV/VIDEO CODE.
   - "TV" will appear on the LCD.
2. Use the numeric keys and MARK/ERASE to select the TV's channel while "TV" is on the LCD.
   - With televisions using Code 1, 4, 5, 7, or 8, both the MARK and ERASE buttons correspond to the 1-digit/2-digit entry switching button (often labelled -/--) of your TV's remote control.
   - With televisions using Code 2, 6, or 9, the MARK button corresponds to the 10+ button, and the ERASE button, to the 20+ button of your TV's remote control.



NOTE:

The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

Using The Optional Teletext Adapter

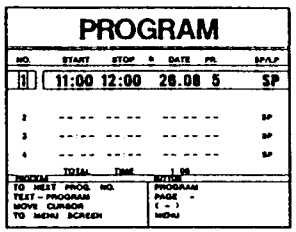
Teletext services have established themselves as one of the most flexible sources of information and broadcast schedules available to TV and video users. Your video recorder is ready to take full advantage of these services. By connecting an optional teletext adapter (☞ Specifications), you'll not only be able to view the vast number of teletext pages now available, you'll be able to transfer broadcast schedule data directly to your recorder's timer for instant, automatic timer programming. You'll also be able to make full use of your remote control's capabilities, with all the dual or triple function controls working as intended. Here are just a few examples of features available to you when you connect an optional teletext adapter.

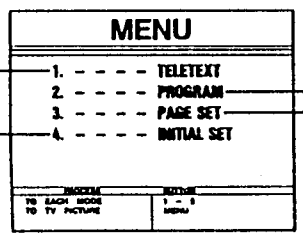
TELETEXT

- View broadcast teletext pages.
- Several page access modes are available for quick and convenient viewing.
- Programme the timer using TV schedule pages.

PROGRAM

- Check the timer recording data on the colour display.
- Programme the timer manually with 10-key input.


PROGRAM
NO. START STOP DATE PR. SP/LP
1 11:00 12:00 26.08 5 SP
2 -- -- -- -- -- -- -- -- SP
3 -- -- -- -- -- -- -- -- SP
4 -- -- -- -- -- -- -- -- SP
TOTAL TIME
TO NEXT PROG. NO.
TEXT – PROGRAM
MOVE CURSOR
TO MENU SCREEN
PROGRAM
PAGE -
(-)
MENU



PAGE SET

- Preset teletext pages so that you can quickly access your favourite or frequently-referred-to pages.
- Four pages can be preset for each of the keys, 0 to 9, totalling 40 pages.

INITIAL SET

LANGUAGE

- Select one of four languages (English, German, Italian or Swedish) for on-screen messages (no effect on teletext pages).

CLOCK ADJUST

- Set the VCR's clock manually with 10-key input.
- Automatic clock setting by reading time information from teletext pages.

Note:
Make sure that nothing is connected to your recorder's front panel Audio, Video, or "S" input terminals when you wish to use the teletext adapter.

ATTENTION

Some buttons on the remote control unit are labelled with pictograms indicating the functions that can be used when the VPT adapter is connected. When reading the VPT adapter's instruction manual, keep in mind the correspondence between these pictograms and the labels referred to in the instruction manual:

⊕ : LARGE/NORMAL ⊕ : HOLD
⊕ : REVEAL ⊕ : MIX
⊕ : TIMED PAGE → : ROTATE
⊕ : RESET

List Of Display Panel Messages

Messages not appearing elsewhere in this manual are listed here. More common messages are all clearly illustrated in the relevant sections.

Displayed Message	When It Appears, What It Means
During Clock Set	
12:59 30/11/91	"12:59" is input for the time. "30th November, 1991" is input for the date.
During Channel Set	
REAL Ch 26 REAL Ch :26 FINE -Ch 26	"Real Channel 26 in Ch band" is stored. "Real Channel 26 in Ch band" is received, but not stored. "Fine tuning" is engaged for "Real Channel 26 in Ch band".
During Normal Operation	
SPEED SP SPEED LP AUDIO DUB A DUB P AUX INPUT AUX INPUT 2 S-INPUT FRONT AV FRONT <S> SIMULCAST REC SP AUX REC LP AUX REC SP AU2 REC LP AU2 REC SP <S> REC LP <S> PAUSE AUX PAUSE AU2 PAUSE <S> SKIP BLANK INDEX + 9 INDEX – 4 INDX MARK INDX ERASE REPEAT	Tape speed is changed from LP to SP. Displayed for 5 seconds. Tape speed is changed from SP to LP. Displayed for 5 seconds. Audio dubbing is in progress. Audio dubbing is paused. External input via AV1 IN/OUT is selected. External input via AV2 IN is selected. External input via rear panel S IN/AUDIO IN is selected. External input via front panel INPUT V/L/R is selected. External input via front panel INPUT S/L/R is selected. Simulcast recording is selected. Displayed for 5 seconds. Recording "external input" via AV1 IN/OUT in the SP mode. Recording "external input" via AV1 IN/OUT in the LP mode. Recording "external input" via AV2 IN in the SP mode. Recording "external input" via AV2 IN in the LP mode. Recording "external input" via S IN/AUDIO IN or INPUT S/L/R in the SP mode. Recording "external input" via S IN/AUDIO IN or INPUT S/L/R in the LP mode. Recording is paused during REC SP (or LP) AUX. Recording is paused during REC SP (or LP) AU2. Recording is paused during REC SP (or LP) <S>. Skip Search is started. Displayed for 5 seconds. Blank Search is started. Changes to REMAIN after 5 seconds. Searching for the 9th index code in the forward direction. Searching for the 4th index code in the reverse direction. Index code is being marked. Index code is being erased. Blinking during rewind for Repeat Playback.

Displayed Message	When It Appears, What It Means
During Next Function Memory	
REW – OFF ↻ OFF REW – PLAY ↻ PLAY REW – TIMER ↻ TIMER REW – EJECT ↻ EJECT	Will rewind to the beginning and then shut off automatically. Will rewind to the beginning and then start playback automatically. Will rewind to the beginning and then enter the timer mode automatically. Will rewind to the beginning and then eject the tape automatically.
Clock and Counter Displays	
4:30:15 31/12 10:30 31/12 I 10:30 REC LP 1:30 TIMER I 10:30 SET CLOCK I	Tape counter reading of "4 hours, 30 minutes, 15 seconds". It is 31st December, 10:30. (Standard date/time display when recorder power is turned off) Same as above with Child Lock ON. Recording in the LP mode with the Off Timer set to shut off in 1 hour 30 minutes. It is 10:30 and the Timer Standby mode is engaged with Child Lock ON. The clock is not set. Please set it. The recorder is locked with Child Lock ON..
Other Messages	
GOOD MORNING ↻ GOOD AFTERNOON ↻ GOOD EVENING ↻	Automatic greetings when the recorder is turned on.
GOOD-BYE GOOD NIGHT	Automatic greetings when the recorder is turned off.

NOTE:
This list represents the various types of messages your recorder is capable of generating. Actual messages displayed by your recorder (esp. if date, time, channel, tape counter reading, or other variables are involved) will differ slightly from those listed here.

Channel Number Grude

Only the transmitters are listed. There are in addition many relay stations, and full lists are available from BBC and IBA.

	BBC1	BBC2	ITV	CH4
London & South-East				
Bluebell Hill	40	46	43	65
Crystal Palace	26	33	23	30
Dover	50	56	66	53
Heathfield	49	52	64	67
Oxford	57	63	60	53
South-West				
Beacon Hill	57	63	60	53
Caradon Hill	22	28	25	32
Huntshaw Cross	55	62	59	65
Redruth	51	44	41	47
Stockland Hill	33	26	23	29
Channel Islands				
Fremont Point	51	44	41	47
South				
Hannington	39	45	42	66
Midhurst	61	55	58	68
Rowridge	31	24	27	21
West				
Mendip	58	64	61	54
East				
Sandy Heath	31	27	24	21
Sudbury	51	44	41	47
Tacolneston	62	55	59	65
Midlands				
Ridge Hill	22	28	25	32
Sutton Coldfield	46	40	43	50
The Wrekin	26	33	23	29
Waltham	58	64	61	54
North				
Belmont	22	28	25	32
Emley Moor	44	51	47	41

	BBC1	BBC2	ITV	CH4
North-West				
Caldbeck	30	34	28	32
Winter Hill	55	62	59	65
North-East				
Bilsdale West Moor	33	26	29	23
Chatton	39	45	49	42
Pontop Pike	58	64	61	54
Scotland				
Angus	57	63	60	53
Black Hill	40	46	43	50
Sandale	22	—	—	—
Caldbeck	—	34	28	32
Creigkelly	31	27	24	21
Darvel	33	26	23	29
Durris	22	28	25	32
Eitshal	33	26	23	29
Keelylang Hill	40	46	43	50
Knock More	33	26	23	29
Rosemarkie	39	45	49	42
Rumster Forest	31	27	24	21
Selkirk	55	62	59	65
Wales				
Blaenplwyf	31	27	24	21
Carmel	57	63	60	53
Llanddona	57	63	60	53
Moel-y-Parc	52	45	49	42
Presely	46	40	43	50
Wenvoe	44	51	41	47
Northern Ireland				
Brougher Mountain	22	28	25	32
Divis	31	27	24	21
Limavady	55	62	59	65

In Case Of Difficulties

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	■ Is the power cord disconnected? — Connect it.
Clock is functioning properly, but the recorder cannot be powered.	■ Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Tape does not run during recording.	■ Is "PAUSE" displayed on the display panel? — Press the PLAY button to extinguish the display.
Tape stops during rewind or fast-forward.	■ Is the C. MEMORY button pressed? — Press again to make "M" disappear from the display panel.
Tape will not rewind or fast-forward.	■ Is the tape already fully rewound or fast-forwarded? — Check the cassette.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	■ Is a cassette loaded? ■ Is the safety tab on the cassette removed? — Reseal the slot with adhesive tape.
TV broadcasts cannot be recorded.	■ Has "external input" selected? — Set to the desired channel.
Tape-to-tape editing is not possible.	■ Is the VideoMovie or another video recorder correctly connected? ■ Are all necessary power switches turned ON? ■ Has "external input" selected? — Set to the correct input mode. (☞p.33)
Camera recording is not possible.	■ Is the VideoMovie correctly connected? ■ Has "external input" selected? — Set to the correct input mode. (☞p.33)
Timer recording is not possible.	■ Have you set the clock correctly and programmed the timer correctly? — Check once again. ■ Is "TIMER" displayed on the display panel? — If not, press the TIMER button to display "TIMER".

PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	■ If you are using RF OUT connection, is the TV receiver's channel selector set to the correct video channel? — Set it to the RF converter channel (UHF 36). (☞p.10) ■ If you are using AV connection, is the TV receiver set to the AV mode? — Set it to the AV mode.
Playback is repeated.	■ Is the REPEAT switch set to either FULL or INDEX? — Set it to OFF.
Noise appears during visual search.	■ This is normal.
Noise appears during normal playback.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞p.23)
Noise appears during slow motion playback.	— Try manual tracking. (☞p.23)
Noise appears during still playback.	— Press PAUSE/STILL a few times to remove the noise bars from the screen.
Playback picture is blurred or interrupted while TV broadcasts are clear.	■ Video heads may be dirty. — Head cleaning is necessary. Consult your JVC dealer. (☞p.44)

HI-FI AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on Hi-Fi audio track.	■ Has the SIMUL button been pressed? — Check by pressing OSD. If "SIMUL" appears on the screen, cancel it by pressing SIMUL button.
Breaks are noticeable in Hi-Fi audio reproduction.	■ Is the automatic tracking mode engaged? — Try manual tracking. ☞p.23

OTHERS

Symptoms	Check points
Whistling or howling is heard from TV during camera recording.	■ Move VideoMovie or camera's microphone away from TV or reduce TV sound volume.
Clock setting is not possible.	■ Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Some channels are skipped over when scanning channels.	■ Those channels are preset to be skipped over. If you need the, restore them. (☞p.37)
Channel cannot be switched.	■ Is recording in progress? — Press the PAUSE/STILL button, change the channel, and press the PLAY button.
Remote control does not function.	■ Are the batteries discharged? — Replace with new ones. ■ Is the A/B CODE indicator showing the proper code for the recorder being operated? — Set the A/B CODE switch to the correct setting.
Index Search does not function properly.	■ Adjacent index codes may be too close to each other. — Erase some index codes and mark new ones if necessary, with sufficient distance between any two index codes.

ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

Special Note On Head Cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this model is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered please consult the nearest JVC dealer.

Auto Head Cleaner

A built-in head cleaner automatically cleans the video heads and head drum whenever a tape is loaded or unloaded to reduce head clogging.

SECTION 1
DISASSEMBLY AND MECHANISM ADJUSTMENTS

1.1 DISASSEMBLY

1.1.1 Top cover

1. Set for the EJECT (Stop) mode and disconnect VCR from AC power.
2. Take out four screws Ⓐ . To remove the top cover, slide it in the direction of the arrow and lift it away.

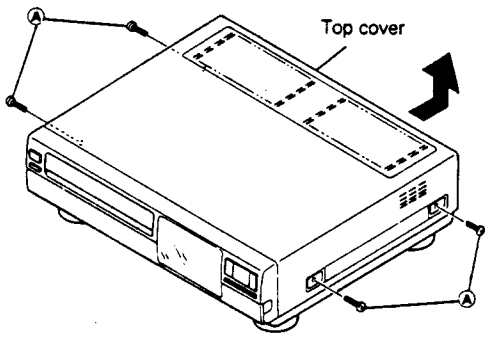


Fig. 1-1-1

1.1.2 Front Panel assembly

1. Remove the top cover.
2. Carefully disengage three tabs ⓐ of the front panel assembly from the upper side of the chassis.
3. Refer to Fig. 1-1-2 and pull the front panel assembly forward you to disengage three tabs ⓑ of the front panel assembly from the bottom side of the chassis, then remove the front panel assembly.

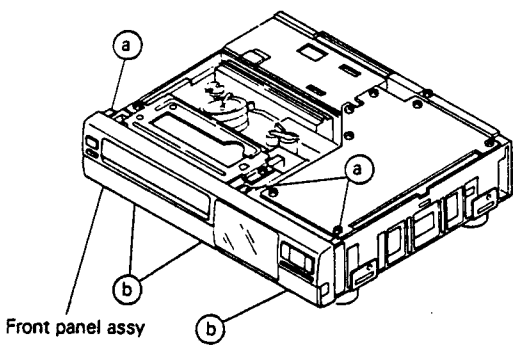


Fig. 1-1-2

1.1.3 Bottom cover

1. Remove the top cover.
2. Take out twelve screws Ⓑ from the bottom of the chassis.

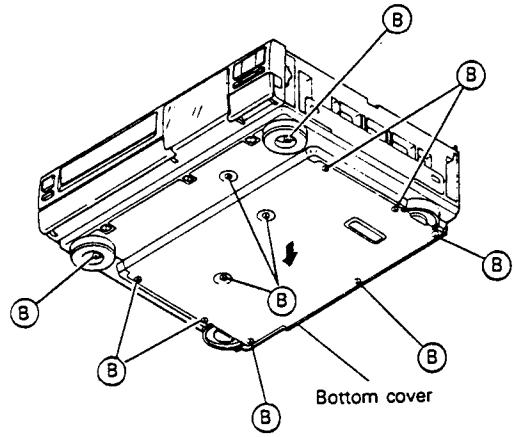


Fig. 1-1-3

1.1.4 VIDEO INTERFACE board assembly

1. Remove the top cover.
2. Take out eight screws Ⓑ and four screws Ⓒ from main board assembly.
3. Remove the video interface board assembly in the upward direction.

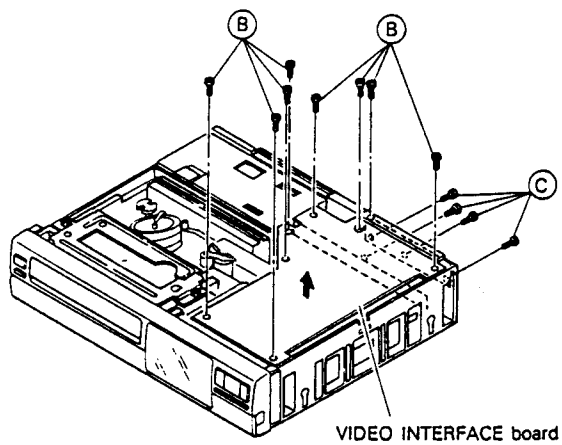


Fig. 1-1-4

1.1.5 SW. REGULATOR board assembly

1. Remove the top cover.
2. Refer to section 1.1.4 and remove the VIDEO INTERFACE board assy.
3. Take out two screws Ⓑ from the SW. REGULATOR board assy.
4. Remove the SW. REGULATOR board assy in the upward direction.

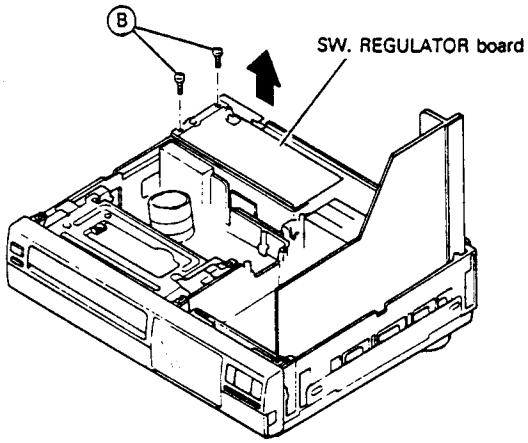


Fig. 1-1-5

1.1.6 REC board assembly

1. Remove the top cover.
2. Take out two screws Ⓓ .
3. Disconnect connectors from the REC board assy and remove the REC board assy in the upward direction.

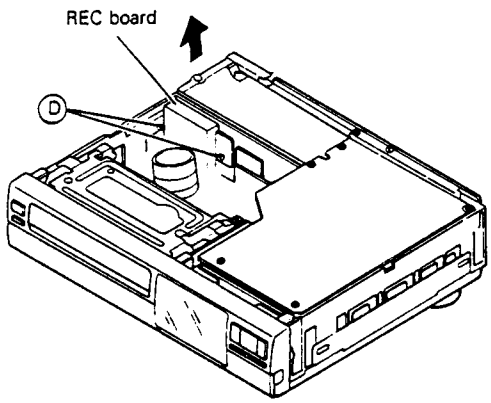


Fig. 1-1-6

1.1.7 TIMER/DISPLAY/SW board assembly

1. Remove the top cover and front panel.
2. Disengage five tabs ⓐ of the upper side of the chassis, then remove the TIMER/DISPLAY/SW board assy.

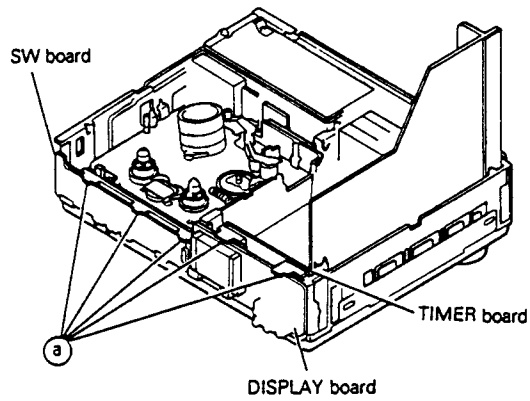


Fig. 1-1-7

1.1.8 Cassette housing

1. Remove the top cover and front cover.
2. Take out four screws Ⓖ that secure the cassette housing.
3. Remove the cassette housing in the upward direction.

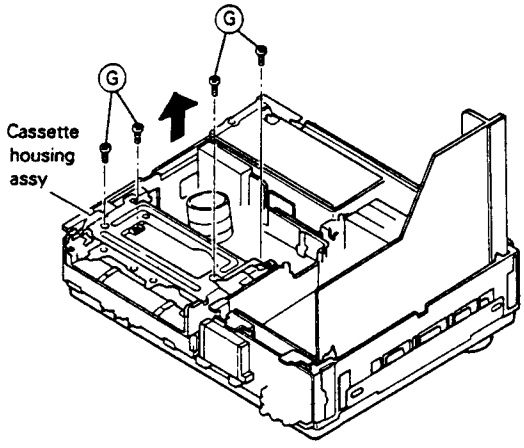


Fig. 1-1-8

1.1.9 Cassette housing installation

1. On the main deck, observe the positional relationships of the parts indicated in Fig. 1-1-9.
   If necessary, turn the loading motor by hand to obtain these positions.

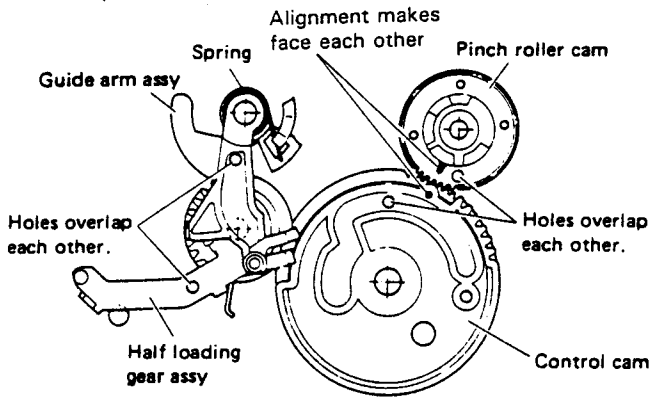


Fig. 1-1-9

2. Confirm that the clutch is engaged.
   If necessary, press the lever indicated by the arrow to where the clutch is locked.

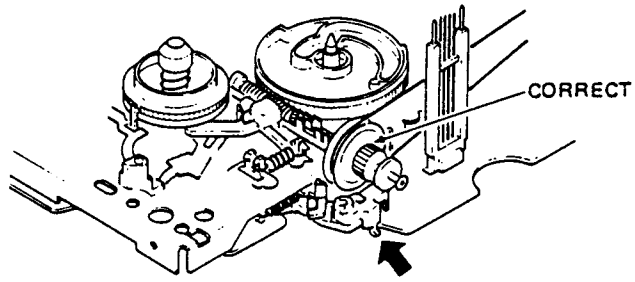


Fig. 1-1-10

3. Check that the cassette housing is in the eject state (internal holder of the cassette housing is locked in raised position).
   Set the cassette housing into place and secure with four screws.
4. Install the front panel as shown in Fig. 1-1-11 and reengage the tabs. Supply power and use a spare cassette to check for normal loading and eject operations.

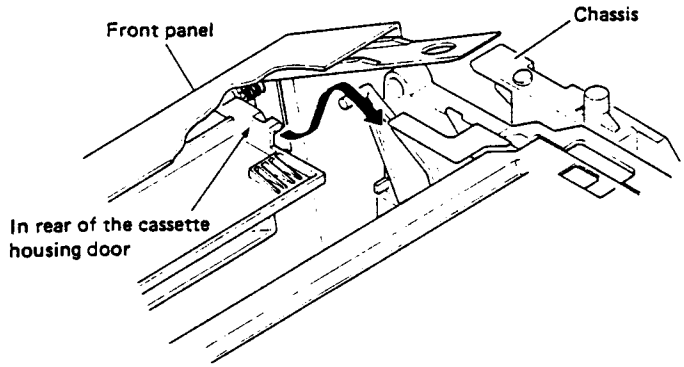


Fig. 1-1-11

5. Disconnect VCR from power, then reinstall the main board assembly and top cover.

1.1.10 Main-deck

1. Remove the top cover, front panel assembly and cassette housing assembly.
2. Take out three screws Ⓗ from the main-deck assembly.
3. Remove the main-deck assembly in the upward direction.

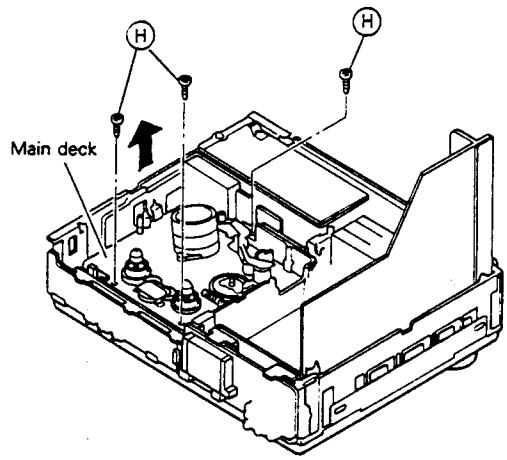


Fig. 1-1-12

1.2 MECHANISM ADJUSTMENTS

1.2.1 Precautions

1. Disconnect the unit from AC power before soldering.
2. Avoid imparting stress to wires when disengaging connectors.
3. Determine and correct the cause of difficulty before proceeding to adjustments. Do not disturb settings unnecessarily.
4. Use care not to damage tabs, claws, etc. during repairs.
5. Install the cassette housing assembly only when the mechanism is in the Eject or Stop mode position. In the Eject mode, the internal holder of the housing is fully raised. This is fully lowered in the Stop mode.
6. When installing the front panel assembly, be sure to engage the housing door with the door lever of the cassette housing assembly. If this step is omitted, the door will not open at Eject and the cassette cannot be removed.

1.2.2 Check without cassette housing

Mechanism operations can be observed easily by removing the cassette housing assembly. Note the following.

1. Disable the photo transistor sensor (END SENSOR) on the main-deck by applying an opaque cover.
2. Connect pins 1 and 3 of DECK TERMINAL board connector CN3.
3. Select the desired modes with the operation buttons. However, notice that without tape, setting for the reverse direction modes produces the Stop mode after a few seconds due to absence of the reel sensor output.

1.2.3 Manually removing cassette tape

In event of electrical system failure that prevents the tape from being unloaded, the tape can be removed manually by the following procedure. Refer to Figs. 1-3-1, 1-3-2 and 1-3-3.

1. Disconnect power cord from AC outlet.
2. Turn the loading motor by hand so that the control cam rotates clockwise. This retracts the pole base assembly to the unloading position.
3. Continue turning to where the guide arm and half loading gear assemblies shift to beneath the cassette.
4. Turn the clutch assembly at the rear of the deck to absorb slack tape within the cassette.
5. Again turn the loading motor in the same direction to raise the cassette and remove it.

1.2.4 Test equipment

The following special tools and fixtures are required for mechanism adjustment.

1. Alignment tapes : MH-2 (SP), MH-2L (LP), MH-F2 (FMA) and MH-2H (S-VHS)
   Stairstep signal is employed for interchangeability checks and adjustments.
2. Torque gauge : PUJ48075-2
   Measures tape take-up torque.
3. Back tension cassette gauge : PUJ48076-2
   Measures tape tension at the supply side.
4. A/C head positioning tool : PUJ47351-2
   Shifts the head base for adjusting the control head position.
5. Roller driver : PTU94002
   Turns the guide roller for adjusting FM linearity.
6. Presetting unit : PTU94008
   Use for LP auto tracking preset adjustment.

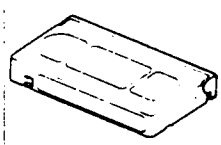
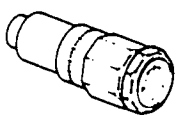
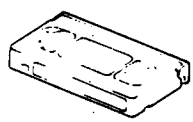
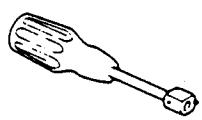
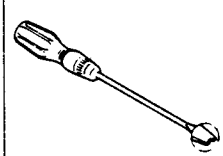
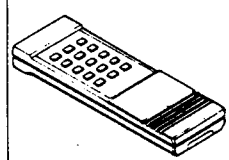
1 Alignment tape	2 Torque gauge	3 Back tension cassette gauge	4 A C head positioning tool	5 Roller driver	6 Presetting unit
					

Fig. 1-2-1 Test equipment

1.3 MAIN MECHANISM PARTS

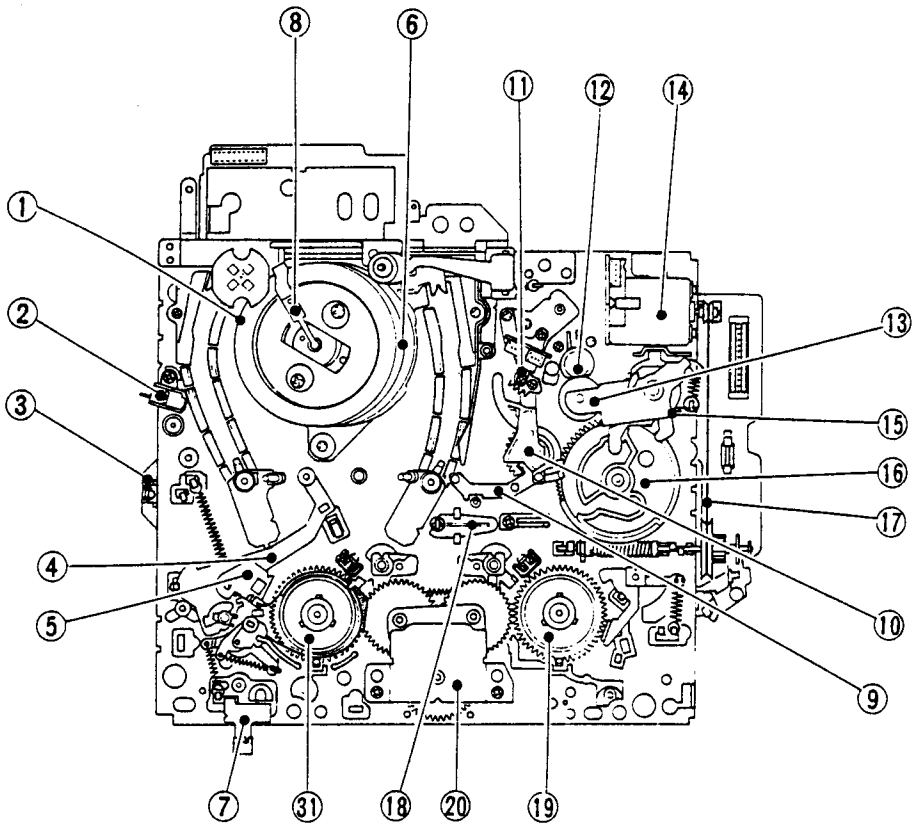


Fig. 1-3-1 Top view of main-deck

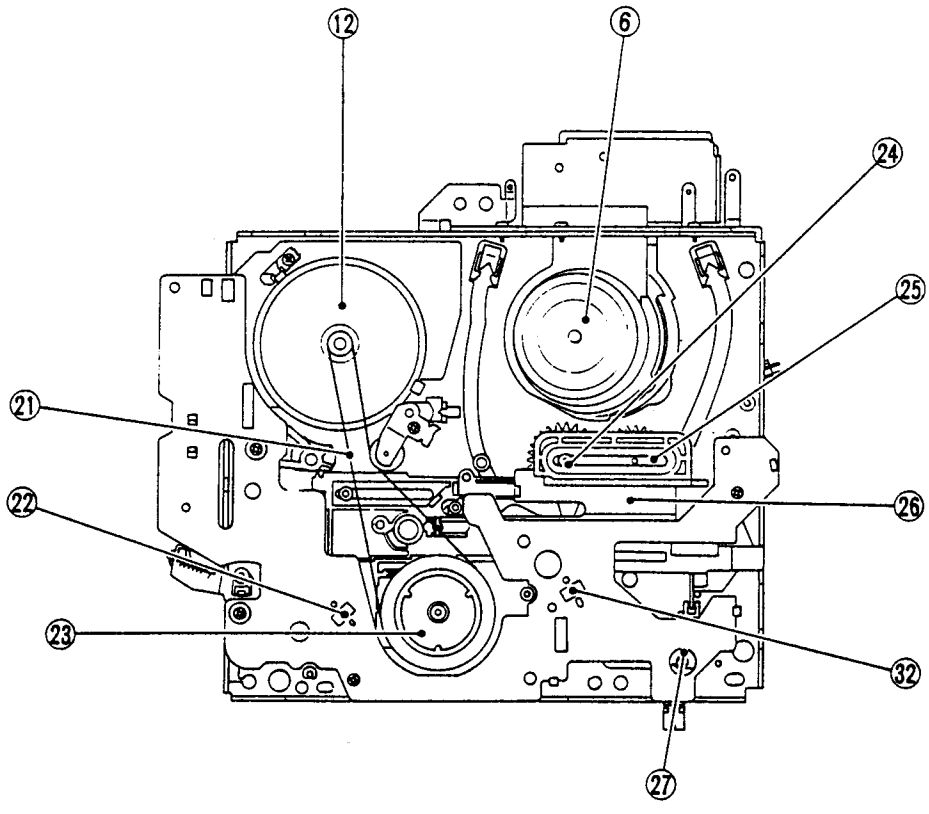


Fig. 1-3-2 Bottom view of main-deck

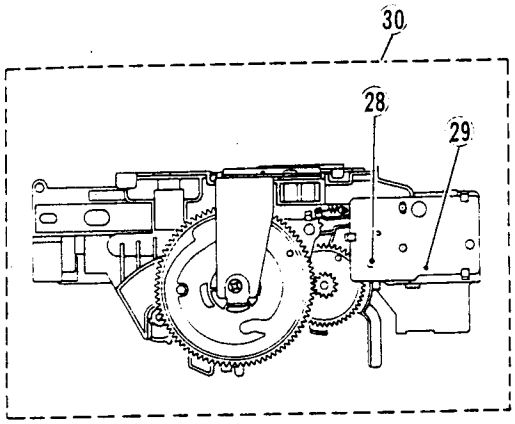


Fig. 1-3-3 Side view of cassette housing

A. Cleaning

Periodic cleaning of the tape transport system is desirable, but ordinarily not feasible in practice. Therefore, perform cleaning when a set is brought in for repairs or maintenance. Contamination of the video heads, tape guides and brushes can detract from playback picture quality and in extreme cases, even damage the tape. For cleaning, use a fine-mesh cotton cloth (about the texture of a white dress-shirt) moistened in alcohol.

- To clean the video heads, press the moistened cloth gently against the upper drum with fingertip and turn the drum by hand.
- Do not use a vertical stroke, as this may damage the heads.

B. Lubrication

Oil and grease do not normally require periodic replenshing. Apply only when replacing lubricated parts (also clean and replace lubrication of mating parts if soiled).

For parts and points to apply oil and grease, refer to the exploded views of the mechanism assembly.

Before oiling, clean with alcohol.
Apply one or two drops of oil. Avoid excess oil.

1. Table 1-1 indicates the oil and grease used in this set. Use these or recommended locally available equivalents.

No.	Parts No.	Category
1	COSMO-HV56	Oil
2	KANTO-G-31KAV	Grease

Table 1-1

2. Grease is not required for a replacement cassette housing assembly, as this has been applied at the factory.

Notes: *Stir grease that has been stored for an extended period.*

C. Main mechanical parts

See Figs. 1-3-1, 1-3-2 and 1-3-3.

No.	Symbol	Parts Name	See Section
1	M32A	Upper drum assy	
2	M44	Full erase head	
3	51Q1	End sensor	
4	M41	Tension arm assy	1.5.4
5	M42	Tension band assy	1.5.4
6	M32C	Lower drum motor assy	1.5.2
7	M461	REC safety switch	
8	M32D	Brush assy	
9	M449	Half loading gear assy	1.5.5
10	M447	Guide arm assy	1.5.5
11	M48	A/C head	1.5.3
12	M422	Capstan motor	
13	M442	Pinch roller arm assy	
14	M434	Mode motor assy	
15	M446	Pinch roller cam	1.5.5
16	M438	Control cam	1.5.5
17	M437	Loading belt	
18	M460	LED holder (D1)	
19	M430	Reel disk (take-up)	
20	M424	Idler gear assy	
21	M429	Timing belt	
22	51PS1	Take up reel sensor (PS1)	
23	M426	Clutch assy	1.5.6
24	M433	Take up loading arm assy	1.5.7
25	M432	Supply loading arm assy	1.5.7
26	M439	Plate assy	1.5.7
27	M462	Slide encorder (S3)	
28	56PHS3	Cassette sensor (PHS3)	
29	56Q2	Start sensor (Q2)	
30	M35	Cassette housing assy	
31	M470	Reel disk (supply)	
32	51PS2	Supply reel sensor (PS2)	

- Symbol interpretation example

M32A: M = Exploded view symbol, 32 = Ref. No., A = Board No.
56 Q2: 56 = Ref. No., Q2 = Ref. No.

1.4 INSPECTION AND MAINTENANCE

This product employs rotary and moving parts which wear in the course of usage. Periodic inspection, cleaning, lubrication and maintenance are therefore important for ensuring maximum performance. Worn parts must also be replaced when required.

1.4.1 Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought in for service and the maintenance work performed if necessary.

Also note that rubber parts may deform in time, even if the set is not used.

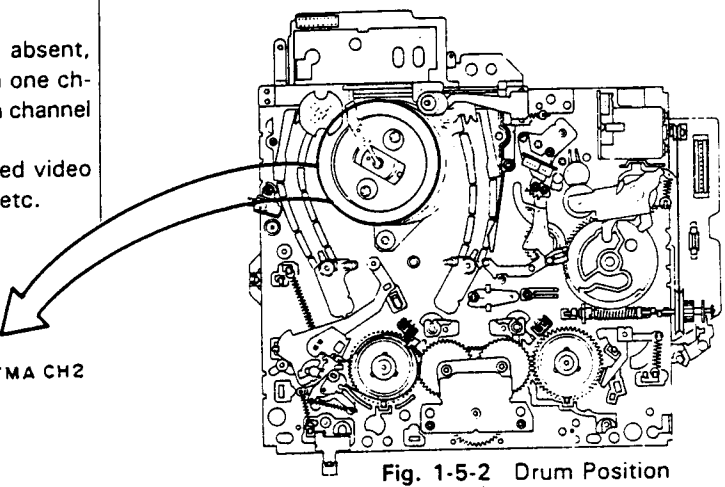
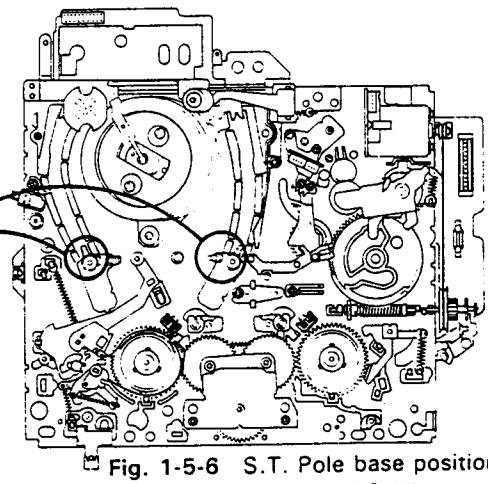
System	No.	Parts Name	Symbol No.	Periodic servicing schedule (operation hours)							
				250	500	750	1000	1250	1500	1750	2000
Tape Transport	1	Upper drum	M32A	★	★	☆	○	○	○	○	○
	11	A/C head	M48	★	★	★	○	○	○	○	○
	13	Pinch roller	M442	★	★	★	○	○	○	○	○
	2	Full erase head	M44	★	★	★	○	○	○	○	○
	4	Tension arm	M41								
	6	Lower drum	M32C				○	○	○	○	○
	12	Capstan (shaft)	M422	★	★	★	★	★	★	★	★
	9	Half loading gear	M449								
	10	Guide arm	M447								
Drive	12	Capstan motor	M422				○	○	○	○	○
	17	Loading Belt	M437				○	○	○	○	○
	21	Timing Belt	M429				○	○	○	○	○
	19	Reel disk (take-up)	M430				○	○	○	○	○
	31	Reel disk (supply)	M470				○	○	○	○	○
	23	Clutch assy	M426								○
	14	Mode motor assy	M434				○	○	○	○	○
		Worm clutch assy	M436								△
	26	Plate assy	M439								△
Others	5	Tension band assy	M42				○				○
	8	Brush assy	M32D				○				○

★ : Cleaning
☆ : Cleaning (or Replacement if necessary)
△ : Lubrication
No: Refer to Main mechanical parts

▲ : Lubrication (or Replacement if necessary)
○ : Inspection or Replacement if necessary

Table 1-4-1 Approximate maintenance schedule

1.5 MAIN PARTS REMOVAL AND REPLACEMENT

No.	Item	Checkpoints	Adjustment and Checks
1	Upper drum assembly •Symptoms: FM signal absent, intermittent or weak on one channel; large difference in channel output levels •Cause: Worn or damaged video heads, poor response, etc.	 Fig. 1-5-2 Drum Position	
		Mounting direction See Fig. 1-5-1. (Symptom: no picture)	After replacing, observe that upper drum hole A is opposite the motor axis from lower drum hole B.
		Axis wobble See Fig. 1-5-2. (Symptom: jitter, poor FM linearity) PB FM: VIDEO UNIT board TP406 FF: Video INTERFACE TP411	Record and playback in LP mode. Confirm absence of large difference between channels. (Fig. 1-5-3) Fig. 1-5-3 Axis wobble
		FM linearity check See Fig. 1-5-5. (Symptom: vertical sync absent, picture noise) PB FM: Video UNIT board TP406 FF: Video INTERFACE TP411	 Fig. 1-5-6 S.T. Pole base position 1) Play stairstep signal of the MH-2 Alignment Tape. Confirm absence of obvious FM waveform loss and that operating the Tracking yields the optimum point. 2) Refer to Fig. 1-5-4, adjust for loss at the left edge (drum entry) of the FM waveform by turning the guide roller of the supply pole base. Similarly, adjust for loss at the right edge (drum exit) by turning the guide roller of the take-up pole base. Note: *If FM loss occurs on both channels and cannot be corrected by adjusting the guide rollers, the lower drum needs replacement.*

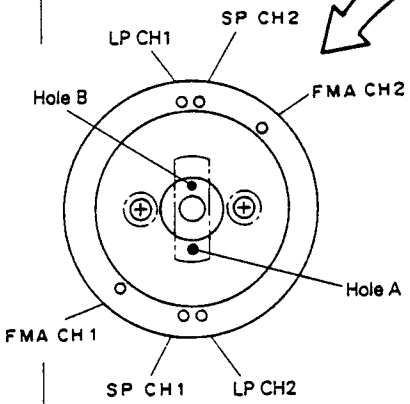


Fig. 1-5-1
DRUM TOP VIEW

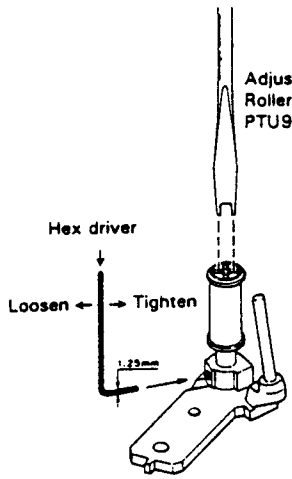


Fig. 1-5-4 S.T. Pole base

Fig. 1-5-5 FM linearity

$\frac{b}{a} \geqq 0.7$, $\frac{c}{a} \geqq 0.65$, $\frac{d}{a} \geqq 0.65$

No.	Item	Checkpoints	Adjustment and Checks
	PB switching point •Symptom: switching noise at picture bottom.	VIDEO OUT (TP10) or TP110 (Video INTERFACE)	1) Connect VCR to AC. Turn power on. 2) Connect an oscilloscope to VIDEO OUT (TP10) or TP110 3) Insert the MH-2 alignment tape to the cassette housing. Play back the stairstep segment of MH-2 alignment tape. 4) Trigger the oscilloscope externally (– slope) with the signal from TP411 (DRUM FF) of the Video I board. 5) Adjust R427 to position the trigger point 7.5 H ±0.5 H from V. sync as shown in Fig. 1-5-7.
2	Lower drum assembly •Symptoms: Poor FM linearity, noisy rotation, jitter •Cause: Lead and bearing wear	Check FM linearity and switching point.	See above upper drum assembly items.
		Check control head phase (X value) Symptom: tracking error PB FM: VIDEO UNIT board TP406 FF: VIDEO INTERFACE TP411	1) Play stairstep signals of MH-2 and MH-2L Alignment Tapes. Engage the Tracking Preset mode by pressing the + and – buttons simultaneously in the onscreen mode. Confirm that the same maximum FM waveform level is obtained as when the tracking is adjusted manually. 2) Refer to the A/C head adjustments.
3	A/C head	Temporarily set height as indicated in Fig. 1-5-8.	Set the height as indicated in Fig. 1-5-8 to facilitate tape transport checks and adjustments.
		Tilt (forward inclination) See Fig. 1-5-9. (Symptom: audio level varies greatly.)	1) Run tape, turn screw ① counterclockwise to where slight curling of the tape occurs at the lower flange of the take-up guide roller. 2) Then slowly turn the screw clockwise to where the curling ceases.
		Azimuth See Fig. 1-5-9. (Symptoms: audio low level or noisy) Audio output: AUDIO OUT	1) Set front panel AUDIO MONITOR selector to Normal and play stairstep signal (with audio 6 kHz) of the MH-2 Alignment Tape. Observe audio output signal with oscilloscope. 2) Turn screw ② and adjust for maximum audio output level.

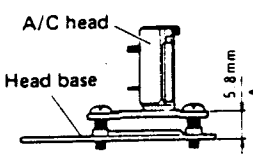


Fig. 1-5-7
PB Switching Point

Fig. 1-5-8
Temporary height

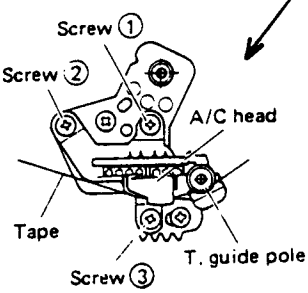


Fig. 1-5-9
Inclination/Azimuth/
Height adj.

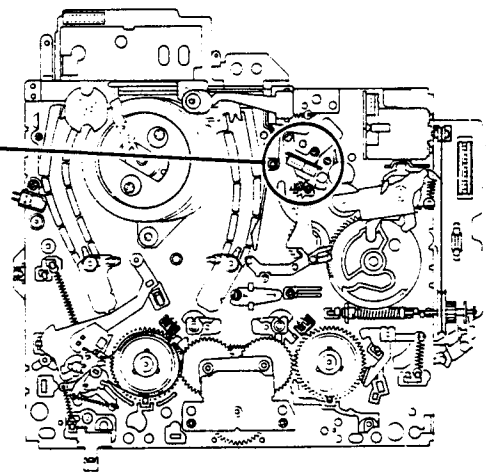
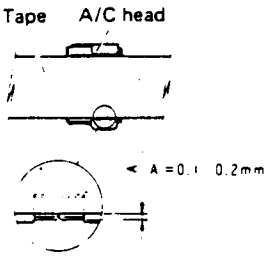
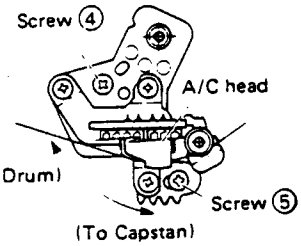
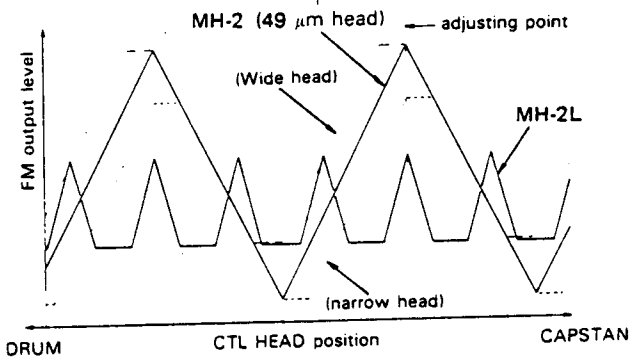


Fig. 1-5-10 A/C HEAD position

No.	Item	Checkpoints	Adjustment and Checks
	 Fig. 1-5-11 Height Adj	Height See Figs. 1-5-9 and 1-5-11. (Symptom: low audio and control signal levels)	1) Run tape and observe the control head area. 2) Turn screws ①, ② and ③ by small and equal amounts until 0.1 to 0.2 mm of the head core bottom can be seen. **Note:** *If difficult to observe, play stairstep signal of MH-2 Alignment Tape and adjust for maximum audio output and control pulse level.*
		FM linearity	Refer to upper drum assembly items. If adjustment is major, again check the azimuth.
	 Fig. 1-5-12 CTL head phase	Control head phase See Fig. 1-5-12 PB FM: Video UNIT board TP406 FF: Video INTERFACE TP411	1) Play stairstep signal of MH-2 Alignment Tape and observe the FM waveform. Set for Tracking Preset by pressing the + and − buttons simultaneously in the onscreen mode. 2) Loosen screws ④ and ⑤. Set the A/C head positioning tool on screw ④, with the stud inserted into the nearby oblong hole. 3) Turn the tool first to position the A/C head fully toward the capstan. Then gradually return it toward the drum and stop at the position of maximum FM waveform output level as shown in Fig. 1-5-13. 4) Tighten screw ⑤ . Remove the tool and tighten screw ④. 5) Play stairstep signal of MH-2L Alignment Tape and confirm maximum FM waveform output level as shown in Fig. 1-5-13. 6) If not maximum, slightly loosen screws ④ and ⑤. Use the tool and adjust the head position for the nearest maximum point. Then tighten screws ④ and ⑤.
	 Fig. 1-5-13 CTL head phase **Note:** *Trigger the oscilloscope externally signal from TP411 (DRUM FF). Use (+) trigger for MH-2 and MH-2L alignment tape. Narrow head is employed for this model.*		
		LP auto tracking adjustment	1) Terminate the video output at 75 ohms with a monitor-TV and connect oscilloscope to PB FM (TP406). 2) Set MH-2L Alignment Tape into the cassette housing and play the stairstep signal. 3) Confirm that the A/V digital tracking LED changes from flashing to lighted. 4) Press button "D" of the preset unit (PTU 94008) to extinguish the A/V digital tracking LED. 5) Again press button "D" to enter the LP interchangeability adjust mode. Confirm that the A/V digital tracking LED changes from flashing to extinguished. Press the stop button. **Note:** *If the Alignment Tape ejects automatically, repeat the control head phase adjustment.*

No.	Item	Checkpoints	Adjustment and Checks
4	Tension arm assembly Tension band assembly	Tension pole position See Fig. 1-5-14. (Symptom: poor FM waveform response)	1) Remove video cassette tape and set for the playback mode as following steps. 2) Disconnect VCR from AC. Slightly rotate the loading motor counterclockwise by hand, then press the lock lever portion Ⓐ of the cassette housing by hand as shown in Fig. 1-5-16. 3) Move the raised portion of the cassette housing slide plate to fully forward by hand with loading motor. At this time, again press the lock level portion Ⓑ of the cassette housing slide plate to lower the cassette housing (internal holder of the cassette housing is locked in lowered position). 4) Cover the cassette LED with opaque material (insulated tape with black). 5) Connect VCR to AC. Press the power button on the Front panel and set for the playback mode. 6) Turn the eccentric adjust pin to align the edge of the chassis with the tension arm tip as shown in Fig. 1-5-14.
		Back tension (Symptom: skew)	1) When the tension pole position is correctly adjusted, the back tension will assume the correct value. 2) Use the Back Tension Cassette Gauge and set for the playback mode. Confirm reading of 35 to 48. 3) Changing the tension pole position in order to vary the back tension will cause adverse effects elsewhere.

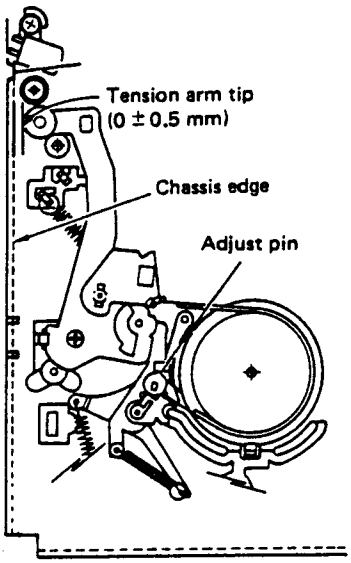


Fig. 1-5-14
Tension arm assy

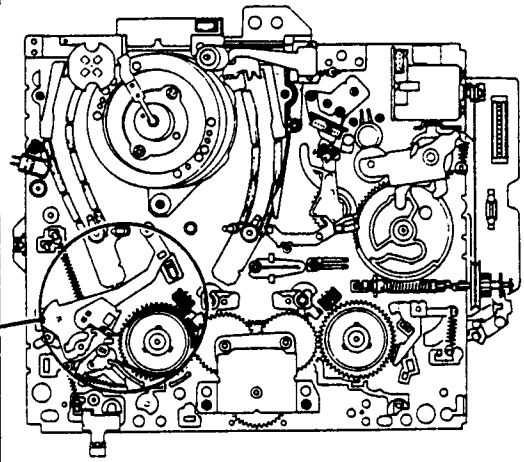


Fig. 1-5-15 Tension arm position

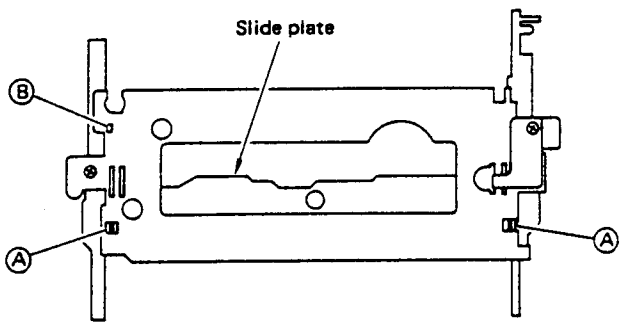
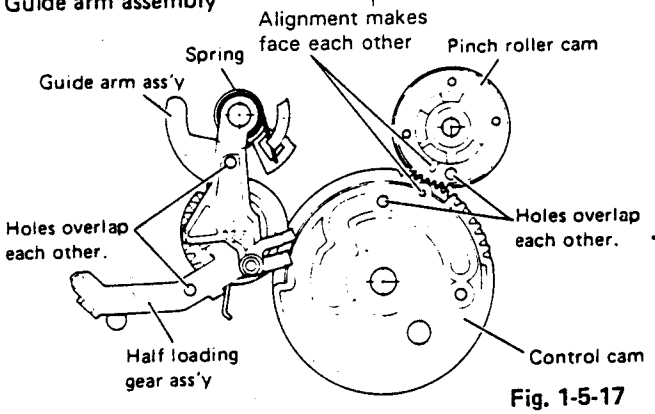
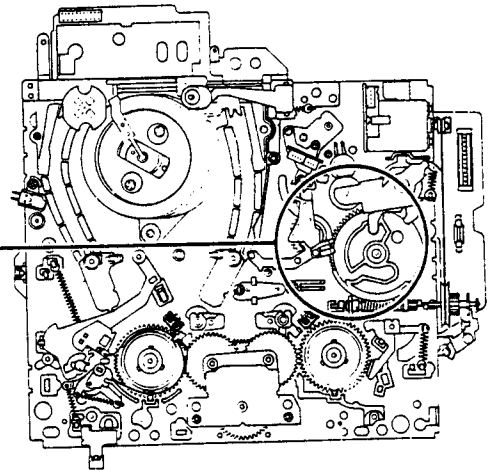


Fig. 1-5-16 Cassette housing

No.	Item	Checkpoints	Adjustment and Checks
5	Pinch roller cam Control cam Half loading gear assembly Guide arm assembly		Set mechanism to Eject mode internal holder of the cassette housing is locked in raised) position.
		 **Fig. 1-5-17** Control/Pinch roller cam	 Fig. 1-5-18 Control cam position
		Important: Do not remove or disturb parts other than those mentioned. See Fig. 1-5-17.	1) When installing the pinch roller cam, overlap the largest hole of the gear portion with the hole of the deck. 2) Set the control cam on the deck with the hole of the groove overlapped with the hole of the deck. Observe that the small hole of the control cam and the ridge of the pinch roller cam are aligned. (If the control cam does not fit readily, shift the rear plate assembly within the range of play.) 3) Install the half loading gear assembly with the hole overlapped with the hole of the deck. Secure with E-ring. 4) Install the guide assembly over the spring and with the hole overlapping that of the deck. Engage the spring correctly.
		Cassette housing assembly	Install the cassette housing assembly with the mechanism in the Eject mode. Also observe that the inner holder of the housing is raised and locked.
6	Clutch assembly	Take-up torque (Symptom: inadequate take-up torque)	1) Remove cassette housing and set for play-back mode (see Section 1.2). 2) Set torque gauge on the take-up reel disk. Gradually relax your grip on the gauge and read the needle indication at the point the gauge begins to rotate with the disk. Confirm indication of 60 to 100.

No.	Item	Checkpoints	Adjustment and Checks
7	Take-up loading arm assembly Supply loading arm assembly Plate assembly		Note: • *Set mechanism to the Eject or Stop mode before removing these parts.* • *The flange of the plastic rivet securing the loading arm assembly and the pole base assembly can be damaged by attempting to remove it directly. Press the loading arm assembly firmly to prevent motion. Then use a narrow-shafted tool to press the rivet from the shaft end to remove it.*
		Mounting position alignment • Remove the tension arm assembly to facilitate operation. See Fig. 1-5-19.	1) Set the supply and take-up loading arm assemblies so that the holes of the gear portions are aligned, then secure to the pole base assemblies with rivets. 2) Shift the plate assembly and install with the holes of the upper and lower components overlapped.
		Slide switch See Fig. 1-5-19.	Be sure to engage the slide switch slider with the edge of the plate assembly.

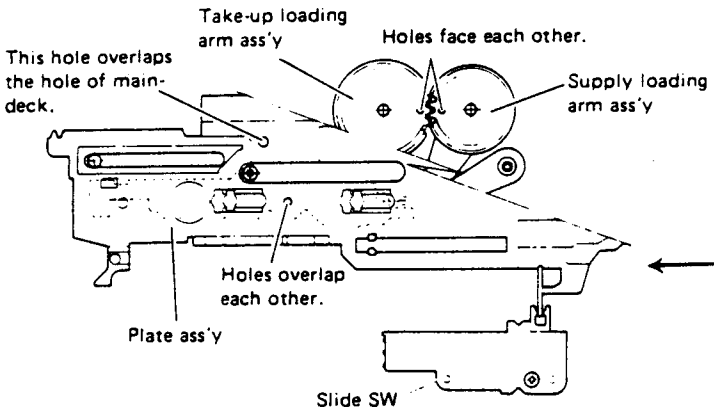


Fig. 1-5-19

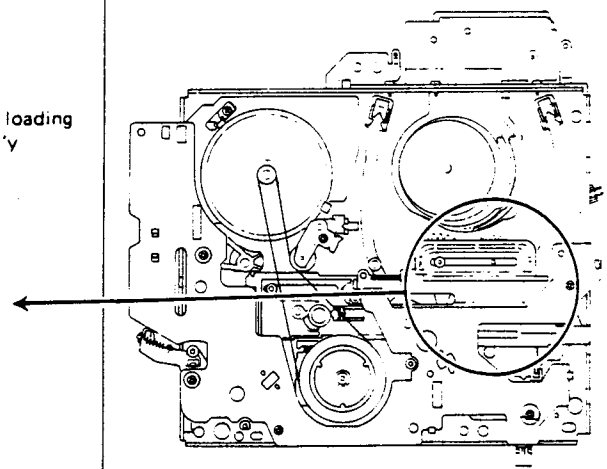


Fig. 1-5-20
T.S. Loading arm position

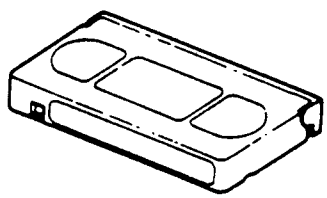
SECTION 2
ELECTRICAL ADJUSTMENTS

2.1 PREPARATION

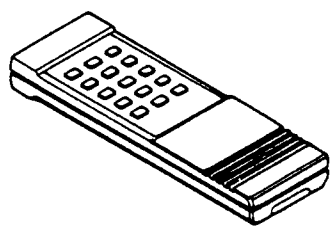
Electrical adjustments are required after replacing circuit components and certain mechanical parts.
It is important to perform these adjustments only after all repairs and replacements has been completed.
Also, do not attempt these adjustments unless the proper equipment is available.

2.1.1 Required test equipment

1. Color television monitor
2. Oscilloscope:wide-band, dual trace, triggered delayed sweep
3. Frequency counter
4. Audio oscillator
5. Digital voltmeter
6. Audio voltmeter
7. Signal generator: RF/IF sweep/marker
8. Signal generator: PAL color bar,stairstep
9. Distortion meter
10. Recording tape
11. Alignment tapes: MH-2 MH-2L MH-F2 MH-2H

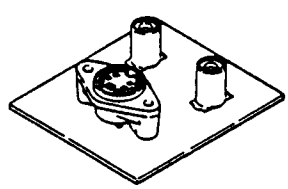


12. Presetting unit(PTU94008)



Note: ***Presetting unit use remote control code "A".***

13. RCA-S adaptor (PTU93001A)



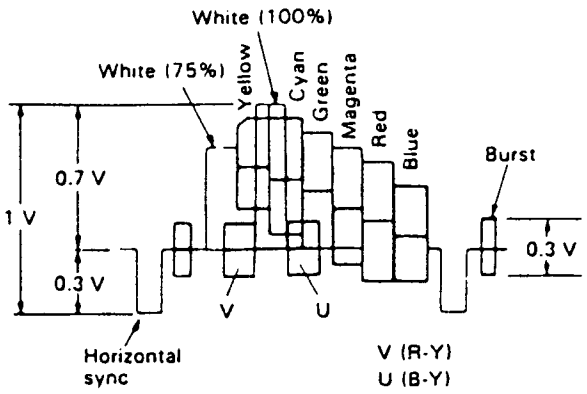


Fig. 2-1-1 Color bar signal of pattern

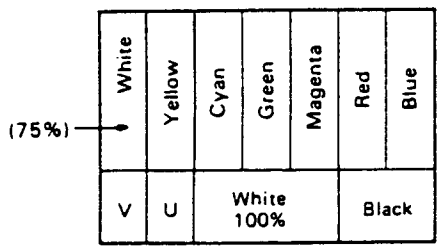


Fig. 2-1-2 Color bar pattern

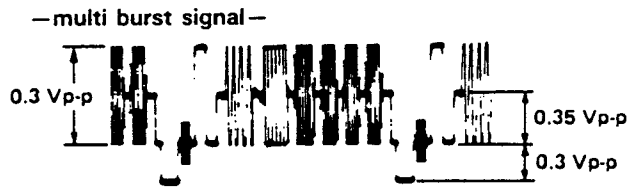


Fig. 2-1-3

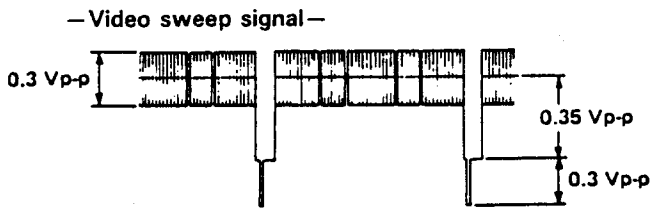


Fig. 2-1-4

2.1.2 Check and adjustment steps

The check and adjustment steps are provided the following in the form charts.
For clarity, the nomenclature used in the charts is outlined below.

No.	Check and adjustments are numbered in the recommended sequence in which they are to be performed.
Item	Name assigned to the particular check and adjustment step. Check point; Location to which measuring instrument (oscilloscope unless otherwise noted) is to be connected.
Adjustment Parts	Variable component(resistor, capacitor, etc) to be adjusted in this step. Dash (–) indicates check only.
Signal & Mode	• Input signal required to perform adjustment. Dash (–) indicate that special signal is not required. • Equipment operating mode at time of check or adjustment.
• Color bar	Color bar signal as video input.
• Stairstep	Stairstep signal as video input.
• 1KHz	1kHz sine wave as audio input signal.
• MH-2 color bar	Color bar segment of MH-2 alignment tape.
• MH-2 stairstep	Stairstep segment of MH-2 alignment tape.
• MH-2 1 kHz	1 kHz Audio signal segment of MH-2 alignment tape.
• MH-2L color bar	Color bar segment of MH-2L alignment tape.
• MH-2L stairstep	Stairstep segment of MH-2L alignment tape.
• MH-F2 stairstep	Stairstep segment of MH-F2 alignment tape.
• MH-F2 1 kHz	1 kHz FM Audio signal segment of MH-F2 alignment tape.
• E-E	Power on and machine in Stop mode.
• REC	Recording mode
• PB	Playback mode
• SLOW	Slow motion playback mode
• STILL	Pause during playback mode
• A DUB	Audio dubbing mode
• SP mode	SP recording speed
• EP mode	EP recording speed
Description	This column provides an explanation of the step, notes and adjustment values, and reference to waveform where applicable.

2.2 SWITCHING REGULATOR CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the Switching Regulator Unit.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	SWITCHED 5V OUTPUT VOLTAGE ADJUST	• REC	• Tuner	• TP-SW5V • TP-GND	• R36 (SWD 5 V)	1) Set the unit to recording mode. 2) Connect a voltmeter to TP SW5V and ground. 3) Adjust R36 to obtain 5.32V.

2.3 SERVO CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the VIDEO INTERFACE Board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	PB switching point	• PB	• MH-2 stairstep	• Trigger slope (−) • Video out	• R427 (PB SW POINT)	1) Connect an oscilloscope to video out. 2) Play the MH-2 stairstep segment. 3) Trigger the oscilloscope externally (−slope) with the signal from TP411. 4) Adjust R427 to obtain switching point to 7.5H ± 0.5H from V. sync as shown Fig. 2-3-1.
2	SP slow tracking	• REC then PB	• SP	• TV monitor	• Presetting unit (PTU94008)	1) Record a color signal in the SP mode. 2) Playback the recorded tape, in both forward and reverse slow modes on slow mode. Press the presetting unit "B" and "C" button to minimize noise bars during slow playback. 3) Set to stop mode and then return to slow mode. Confirm that noise bar is still minimum.
3	LP slow tracking	• REC then PB	• EP	• TV monitor	• Presetting unit (PTU94008)	1) In the same manner as above, SP mode.

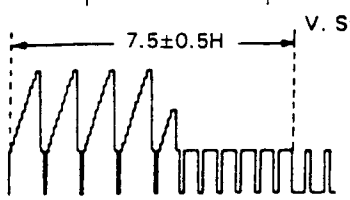
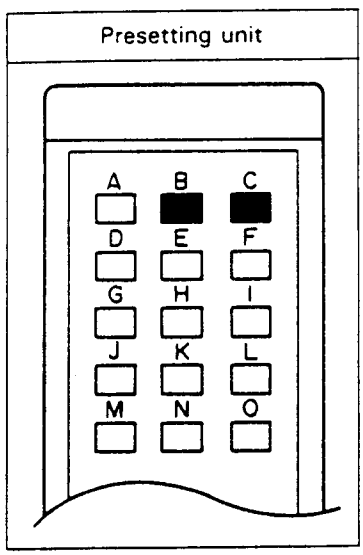


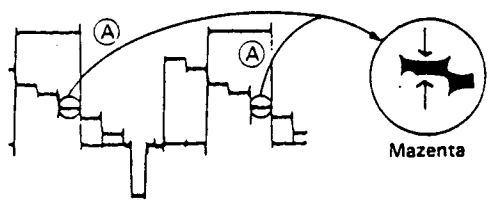
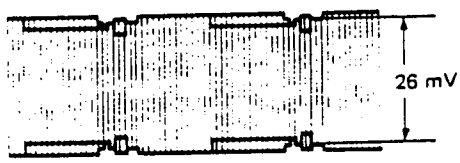
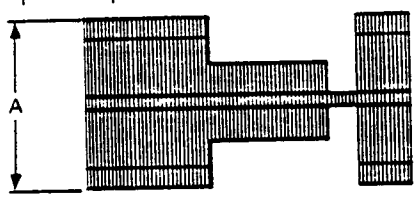
Fig. 2-3-1

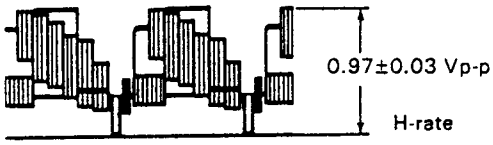
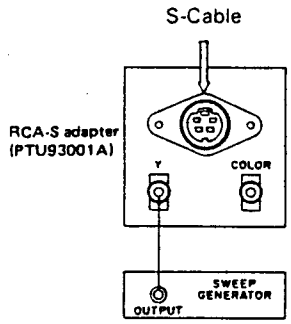
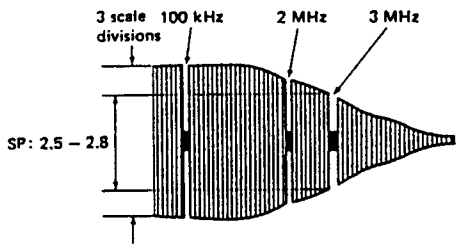


Note: ***Use only buttons "B" and "C".***

2.4 VIDEO CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the VIDEO INTERFACE Board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	Y comb Gain	•E-E	•Color bar •SP •S-VHS	•TP-225 •TP-226	•R206 (Y GAIN)	1) Apply a color bar signal to video input. 2) Connect one channel of a dual trace oscilloscope to TP-225 and the other channel to TP-226. 3) Adjust R206 so that both input level become the same level.
2	4H delayed color level	•E-E	•Color bar •SP •S-VHS	•TP-231 •TP-232	•R234 (2H delay color level) •L203 (2H delay Color level-2)	1) Connect the dual oscilloscope CH-1 to TP-231 and CH-2 to TP-232. 2) Set VOLT/DIV controls of the both channels to the same range (e,G,50mV). 3) Invert CH-2 and use ADD mode. 4) Alternately adjust R234 and L203 for minimum level.
3	Y Comb	•E-E	•Color bar •SP •S-VHS	•TP-225	•R215 (Y comb-1) •R219 (Y comb-2) •R231 (Y comb-3)	1) connect an oscilloscope to TP-225 2) Use the controls of the oscilloscope to expand portion A of the TP-225 waveform. 3) Adjust R215, R219 and R231 alternately for minimum chroma level (less than 40mVp-p of the magenta portion).
						 Fig. 2-4-1
4	E-E level	•E-E	•Color bar •SP •S-VHS	•Video out or TP-110	•R36 (EE Y Level)	1) Connect an oscilloscope to TP-110 or video out. 2) Adjust R36 for 0.97 ± 0.03V p-p (with 75 Ω load).
5	REC FM level	•REC	•Color bar •LP •S-VHS	•TP-1 (PRE AMP)	•R23 (REC FM) (REC AMP)	1) Apply color bar to video input, set the LP REC mode. 2) Connect an oscilloscope to TP-1 on PRE AMP board. 3) Adjust R23 to obtain 26mVp-p.
						 Fig. 2-4-2
6	REC Color level (VHS)	•REC then PB	•MH-2 color bar •SP	•TP-406	•R91 (REC COL) (REC AMP)	1) Connect the oscilloscope to TP-406. 2) Playback the MH-2 alignment tape color bar portion, and note higher color level "A" as shown in Fig 2-4-3. 3) Record then play back the color bar signal,adjust R91 so the higher level channel becomes 110% of the noted level "A" during playback. 4) Confirm the channel level within 4dB. 5) Repeat for LP mode. Adjust R90.
						 Fig. 2-4-3

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
6	PB Y level	• REC then PB	•Color bar •SP •S-VHS	•Y out (TP110)	•R64 (Y LEVEL)	1) Apply a color bar signal to video input. 2) Record then playback the color bar signal. 3) Adjust R64 to obtain a video level of 0.97 V ± 0.03 Vp-p (75 Ω terminated) at TP110.
			 Fig. 2-4-4			
7	PB Y level	• REC then PB	•Color bar •SP •VHS	•Y out (TP110)	•R63 (Y LEVEL)	1) Apply a color bar signal to video input. 2) Record then playback the color bar signal. 3) Adjust R63 to obtain a video level of 0.97 V ± 0.03 Vp-p (75 Ω terminated). **Note:** ***Adjust S-VHS mode first. If adjustments are made in VHS mode, repeat adjustments in S-VHS mode.***
8	S frequency response	• REC then PB	•Color sweep •SP •S-VHS	•Y out (TP110)	•R35 (VIDEO EQ) (REC AMP)	1) Apply a color sweep signal to S-video input. 2) Terminate Y out put with 75 Ω load and set the SHARPNESS CONTROL to center position. 3) Connect the oscilloscope to Y out put, and record then playback color sweep signal. 4) Set the 100kHz color sweep maker level to 3 scale divisions on the oscilloscope. 5) Adjust R35 (REC AMP) so that the 3.0MHZ maker level becomes 2.5 to 2.8 scale divisions (– 1 ±0.5dB). 6) Confirm the channel difference between both channels less than 2 dB.
			 Fig. 2-4-5			
			 Fig. 2-4-6			
		• REC then PB	•Color sweep •LP •S-VHS		•R36 (S LP VIDEO EQ) (REC AMP)	7) In the same manner as above, perform adjust for LP mode. 8) Record in the LP mode then playback. Set 100KHZ sweep maker to 3 scale divisions. 9) Adjust R36 (REC AMP) so that the 3.0 MHZ maker level becomes 2.5 to 2.8 scale divisions (– 1 ±0.5dB).

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
9	N frequency response	•REC then PB	•Color sweep •SP VHS	•Y out	•R65 (N SP VIDEO EQ) (REC AMP)	1) Apply a color sweep signal to S-video input. 2) Terminate Y out put with 75 Ω load and set the SHARPNESS CONTROL to center position. 3) Connect the oscilloscope to Y out put, and record then playback color sweep signal. 4) Set the 100kHz color sweep marker level to 3 scale divisions on the oscilloscope. 5) Adjust R65 so that the 2.0MHz maker level becomes 2.5 to 2.8 scale divisions (−1 ±0.5dB). 6) Confirm the channel difference between both channels less than 2 dB.
		•REC then PB	•Color sweep	•LP •VHS	•R66 (N LP VIDEO EQ) (REC AMP)	7) In the same manner as above, perform adjustment for LP mode. 8) Record in the LP mode then playback. Set 100kHz sweep maker to 3 scale divisions. 9) Adjust R66 so that the 2.0MHz maker level becomes 1.5 to 2.4 scale divisions (−5 ±1.5dB).
10	Input subemphasis level	•E-E	•Color bar •SP •S-VHS	•TP-439 (VIDEO UNIT)	•R416 (SUB EMPHA IN) (VIDEO UNIT)	1) Apply a color bar signal to video input. 2) Connect an oscilloscope to TP-439 on the video unit. 3) Adjust R416 for a video level of 400 mV ± 20mVp-p.
11	YNR balance	•E-E	•Color bar •LP •S-VHS	•TP-421 (VIDEO UNIT)	•R444 (Y NR BAL) (VIDEO UNIT)	1) Apply a color bar signal to video input. 2) Connect an oscilloscope to TP-421 on the video unit. 3) Adjust R444 for minimum DC step difference.

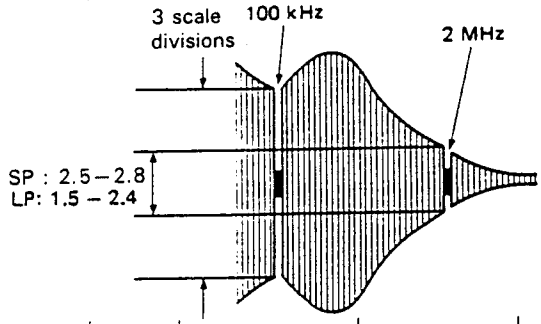


Fig. 2-4-7

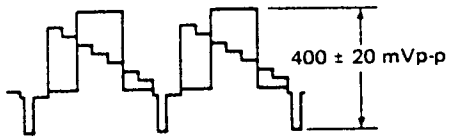


Fig. 2-4-8

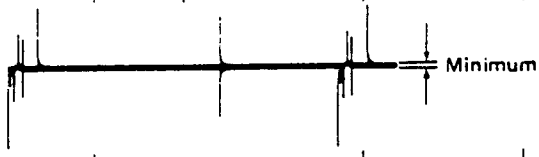
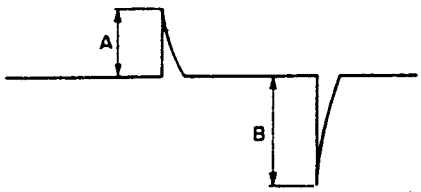


Fig. 2-4-9

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
12	SECAM detector	• E-E	•SECAM color bar	•TP-601	•LC601 (SECAM DET) (VIDEO UNIT)	1) Apply a SECAM color bar signal to video input. 2) Connect an oscilloscope to TP-601 on the video unit. 3) Adjust LC601 to obtain following waveform.



SECAM A : B = 1 : 1
MESECAM A : B = 3 : 4

Fig. 2-4-10

2.5 AUDIO CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the VIDEO INTERFACE board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	Audio bias level	• REC	•No signal •SP	•TP-331 •TP-332 (GND)	•R304 (BIAS LEVEL)	1) Set the unit AUX mode without audio signal. 2) Connect a millivoltmeter between TP-331 and TP-332. 3) Adjust R304 for 2.5mV rms.
2	PB Audio level	• REC then PB	•1kHz •SP	•Audio out audio monitor: normal	•R303 (PB level)	1) Connect an audio tester to AUDIO OUT. 2) Supply audio signal (-8dbs/1KHZ) to Peri-connector. 3) Record and then playback. 4) Adjust R303 so that the audio output level becomes −6 ±2dBs.
3	REC FM level	• REC then PB	•No audio input •S-VHS mode •SP	•TP-53 (PRE/REC)	•R216 (REC LEVEL) (REC AMP)	1) Record no audio input with video signal on EP mode. 2) Playback pre-recorded portion.Connect the oscilloscope to TP-53 on REC PWB. 3) Adjust R216 (REC PWB) to obtain 90 mVp-p FM audio signal as shown Fig 2-5-1.
4	E-E level	• E-E	•1kHz •SP AUDIO HiFi	•Audio out	•R302 •R301 (AUDIO LEVEL)	1) Supply a 1KHZ -8dBs audio signal to Peri. CONN. IN with color bar video signal. 2) Set Hi-Fi REC level and balance control to center position. 3) Adjust R302 and R301 to obtain −6 ± 1dBs audio output level.

Fig. 2-5-1

2.6 ON SCREEN CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the VIDEO INTERFACE board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	Dot clock adjust	•E-E	•menu	•TP901, TV monitor	•C905 (DOT CLOCK)	1) Connect the frequency counter to TP901. 2) Short 3 pin of IC901 to GND and 30 pin of IC901 to VCC(5V). 3) Adjust C905 to obtain 7.30 MHz ± 0.05MHz.
2	Color burst clock	•E-E	•menu	•TP902	•C916 (BURST CLOCK)	1) Connect the frequency counter to TP902. 2) Adjust the C916 for 17.73447 MHz ±0.00030 MHz.

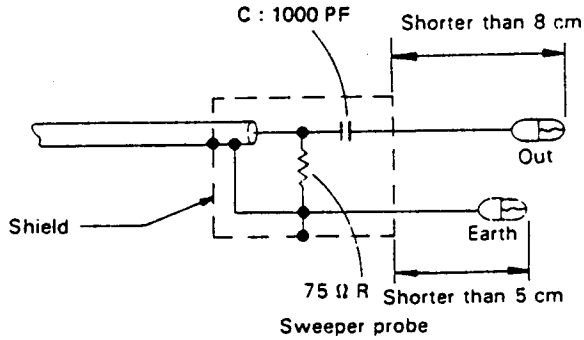
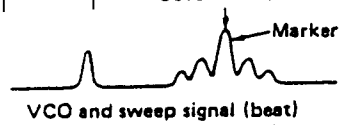
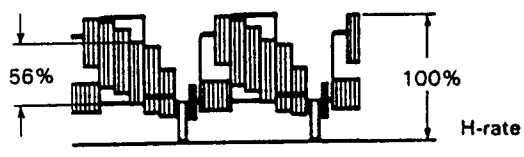
2.7 TIMER CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the TIMER board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
1	Timer clock	•E-E	•Adjust mode	•16 pin of IC1	•C6 (CLOCK ADJ)	1) Disconnect VCR from AC power .Then connect 8 pin of IC1 and GND. 2) Short the leads of capacitor C3 once in order to reset IC1. 3) Connect the frequency counter between 16 pin of IC1 and GND. 4) Connect VCR to AC power. All FDP segments are ON. 5) Adjust C6 for 488.2813 ± 0.0005 μsec (2048.000 ± 0.002HZ).

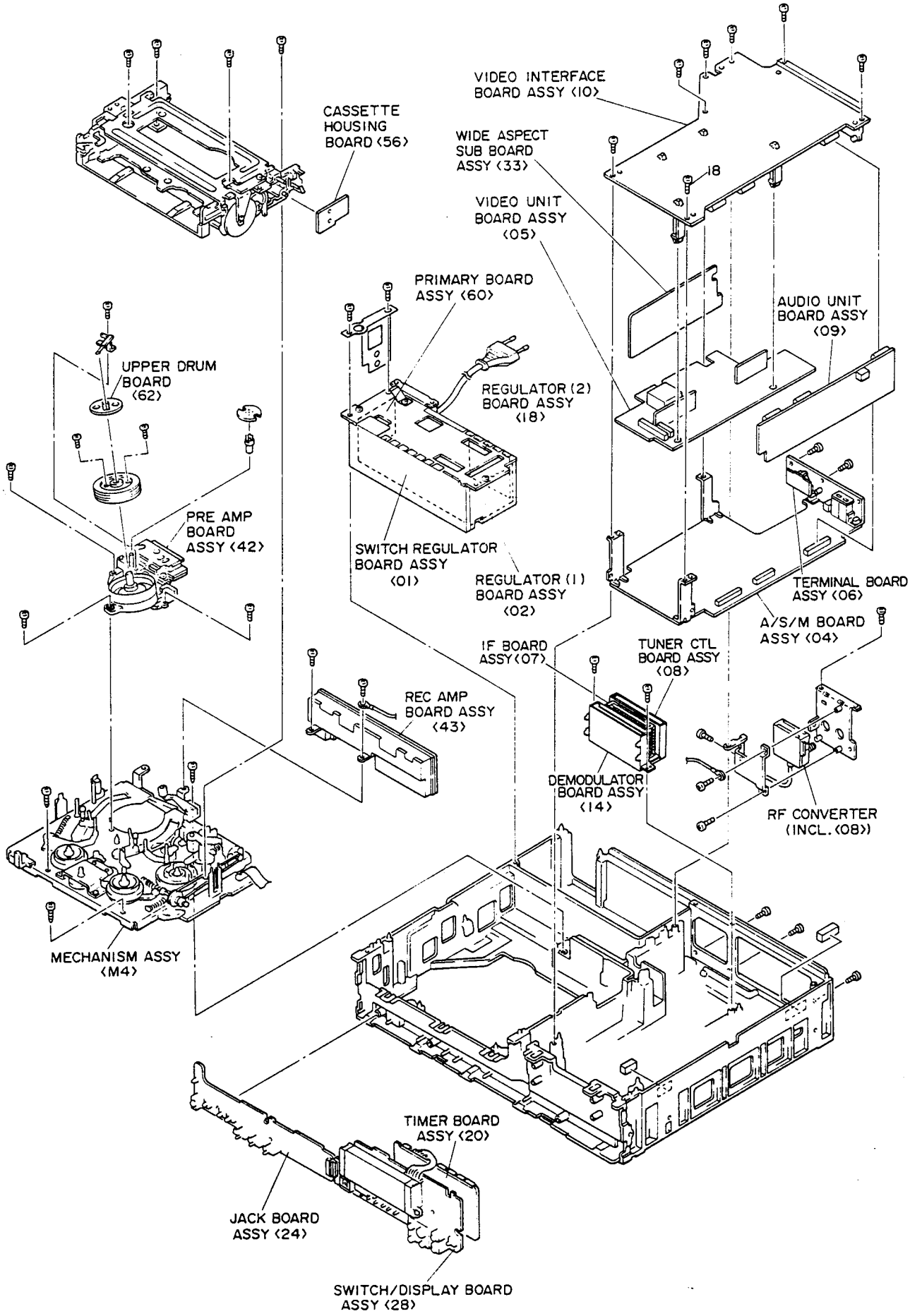
2.8 TUNER/IF CIRCUIT

Note: ***Unless otherwise specified, all test points and adjustments are located on the TUNER/IF board.***

No.	Item	Mode	Signal & Setting	Measurement Point	Adjustment Parts	Adjustment Procedure
Equipment required: 1. Oscilloscope 2. IF sweep signal generator with suitable makers (PIF, etc). 3. Sweeper probe (sweep signal supply cable) as shown below.  Fig. 2-8-1						
1	VCO	• E-E	• Tuner	•28 pin of IC1	•T2 (VCO)	1) Use a sweeper probe as shown in Fig. 2-8-1 and connect the sweep generator out put to SAW input. 2) Apply 6 pin of IC1 to 4.5V DC. 3) Connect an oscilloscope to 28 pin of IC1, and observe sweeper waveform. 4) Adjust T2 for frequency waveform as shown Fig. 2-8-2.
			38.9 MHz (EG/E) 39.5 MHz (EK)  VCO and sweep signal (beat) Fig. 2-8-2			
2	RF AGC	• E-E	• Tuner • TV broadcast	•TV monitor	•R21 (RF AGC)	1) Receive TV broadcast signal, connect the oscilloscope to IF terminal of U/V tuner. 2) Adjust R21 for maximum level, then readjust R21 to − 8dB ± 0.5dB. (− 5dB ± 0.5dB for EK model)
3	Color level	• E-E	• Tuner color bar test signal	•3 pin of CN1	•R40 (COL. LEVEL)	1) Receive color bar test signal,connect the oscilloscope to 3 pin of CN1. 2) Adjust R40 so that magenta level becomes 56% of the video level.
			 Fig. 2-8-3			

SECTION 3
CHARTS AND DIAGRAMS

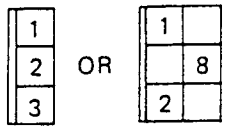
3.1 CIRCUIT BOARD AND LOCATION


VIDEO INTERFACE BOARD ASSY (10)
CASSETTE HOUSING BOARD (56)
WIDE ASPECT SUB BOARD ASSY (33)
18
VIDEO UNIT BOARD ASSY (05)
PRIMARY BOARD ASSY (60)
AUDIO UNIT BOARD ASSY (09)
UPPER DRUM BOARD (62)
REGULATOR (2) BOARD ASSY (18)
PRE AMP BOARD ASSY (42)
SWITCH REGULATOR BOARD ASSY (01)
REGULATOR (1) BOARD ASSY (02)
TERMINAL BOARD ASSY (06)
A/S/M BOARD ASSY (04)
IF BOARD ASSY (07)
TUNER CTL BOARD ASSY (08)
REC AMP BOARD ASSY (43)
DEMODULATOR BOARD ASSY (14)
RF CONVERTER (INCL. (08))
MECHANISM ASSY (M4)
TIMER BOARD ASSY (20)
JACK BOARD ASSY (24)
SWITCH/DISPLAY BOARD ASSY (28)

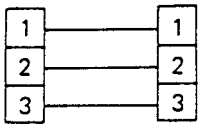
3.2 GENERAL INFORMATION

3.2.1 Connections

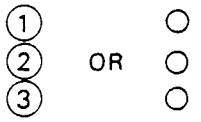
Note:
Unless otherwise specified, only signal input flow is indicated.
Connection arrows indicate only signal outputs.



: Connectors



: Board in connectors



: Direct connections

: Connected pattern in the board.

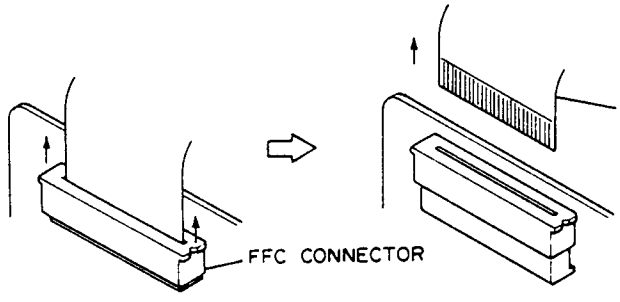
Abbreviations

V	: Video	M	: Mechacon
S	: Servo	A	: Audio

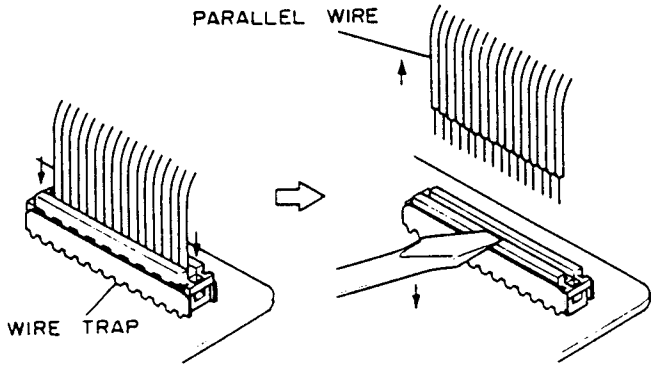
VS : Signal flow from video to servo.

3.2.2 Disconnecting the flatwire

1. Pull the connector structure upward to release the clamp when removing or inserting the flat wire cable.

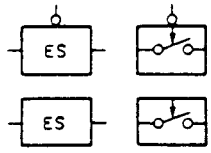


2. Depress the connector structure downward to release the clamp when removing or inserting the flat wire cable, as indicated below.



3.2.3 Indications

AUX : Active only at high.
$\overline{AUX}$: Active only at low.
$\bar{A}U\bar{X}$: Active only at middle.
$\bar{A}U\bar{X}$: Active only at open.



: Active only at low for electronic switch.
: Active only at high for electronic switch.

: Low pass filter.
: High pass filter.
: Band pass filter.
: Limiter.
: Detector
: Amplifier.
: Mixer stage.

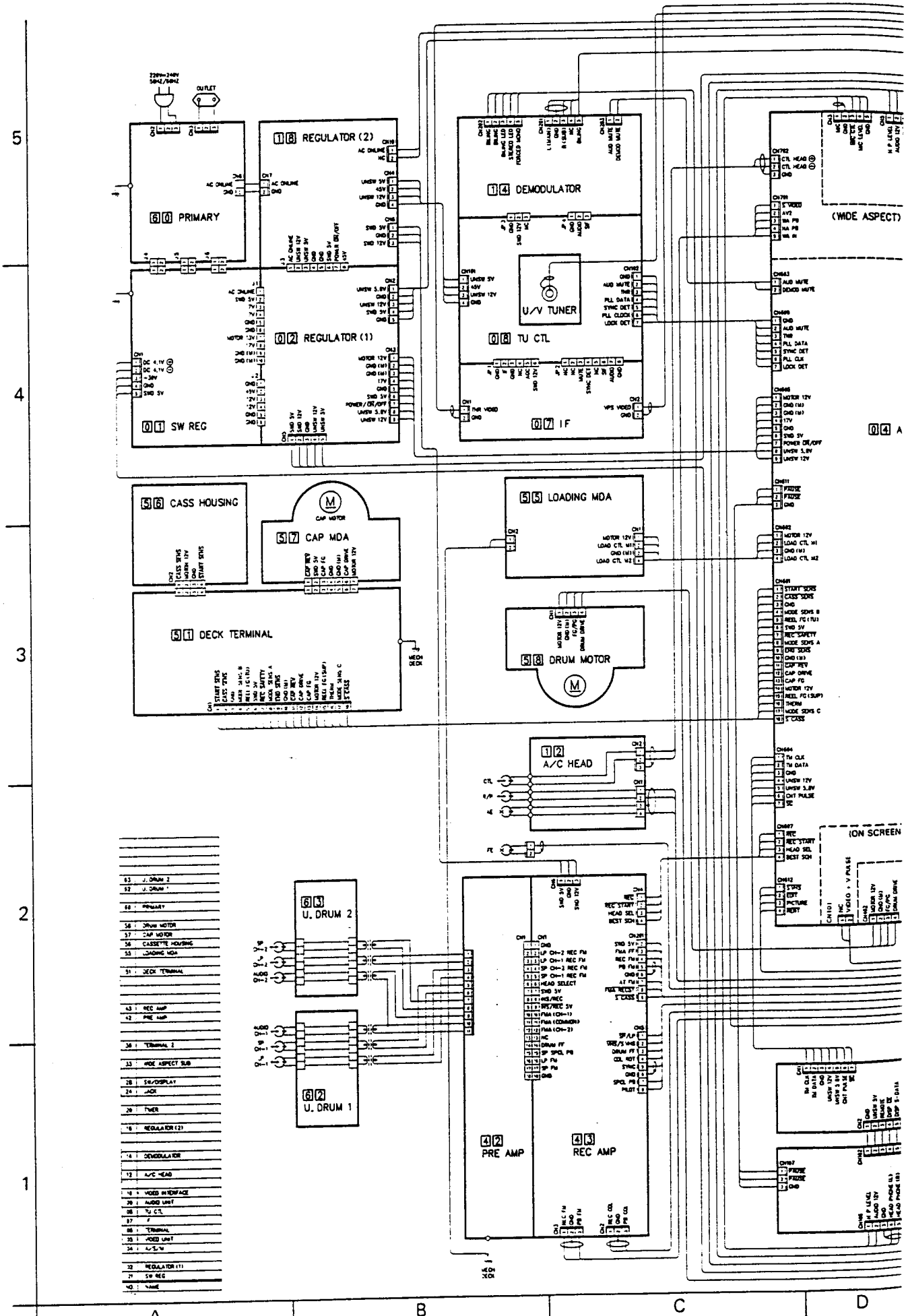
3.2.4 Schematic diagram values

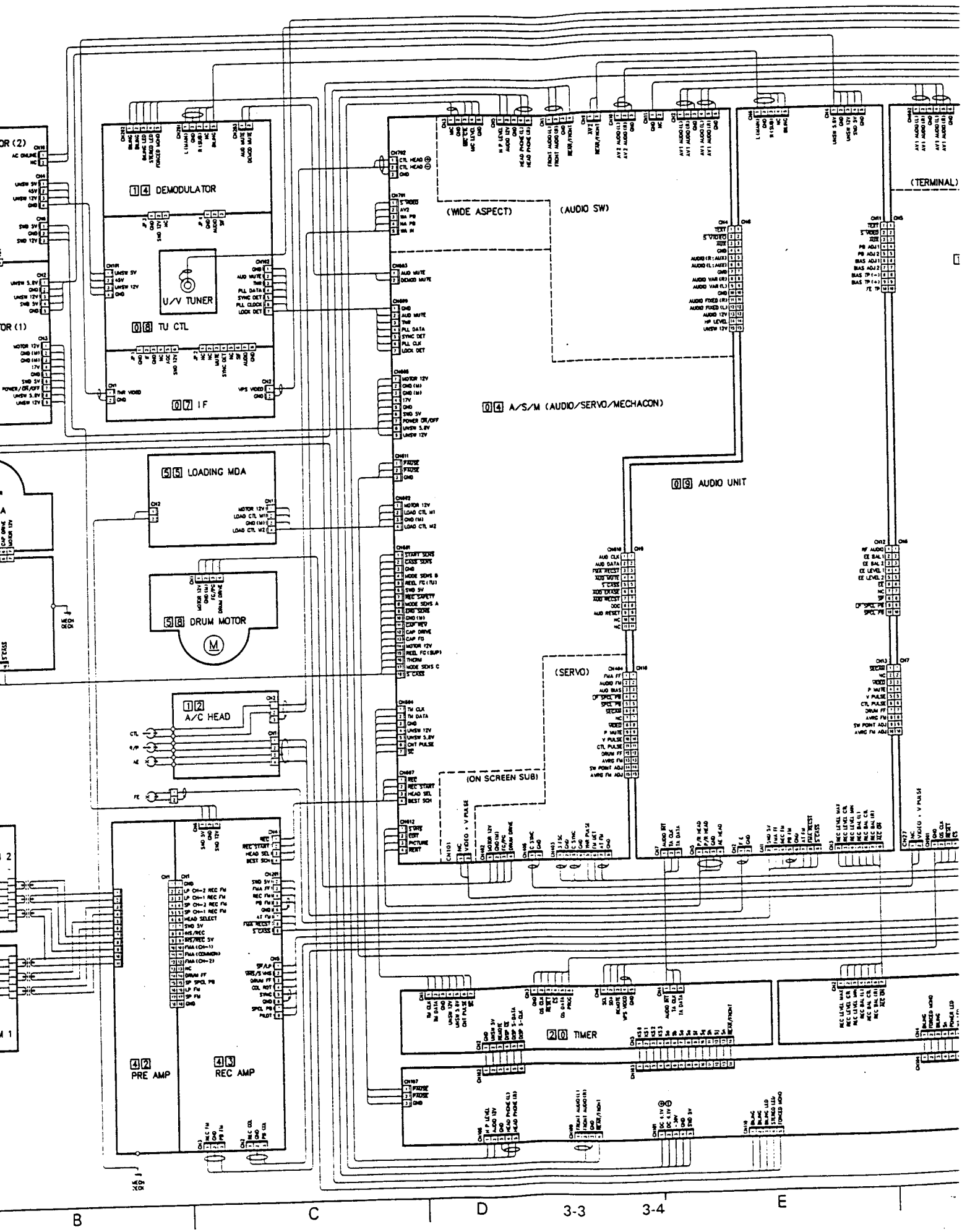
Unless otherwise specified.
1. All resistance values are in ohms, 1/6 W or 1/8 W (refer to parts list).
2. All capacitance values are in μF, (P; PF).
3. All inductance values are in μH, (m; mH).
4. All diodes are 1SS133 or MA165, (refer to parts list).
5. Voltages are DC-measured (reference to ground) with a digital voltmeter during recording (SP mode) and playback (SP mode) with alignment tape. Where voltages differ between recording and playback, the voltage during playback is shown in parenthesis.
6. Waveforms (VIDEO System) are measured (reference to ground) with a color bar during recording (SP mode) and playback (SP mode) with alignment tape.
7. Waveforms (AUDIO System) are measured (reference to ground) with 1 kHz (−8 dBs) during recording and playback with alignment tape (1 kHz).
8. Shaded (▒) parts are critical for safety. Replace only with specified part numbers.

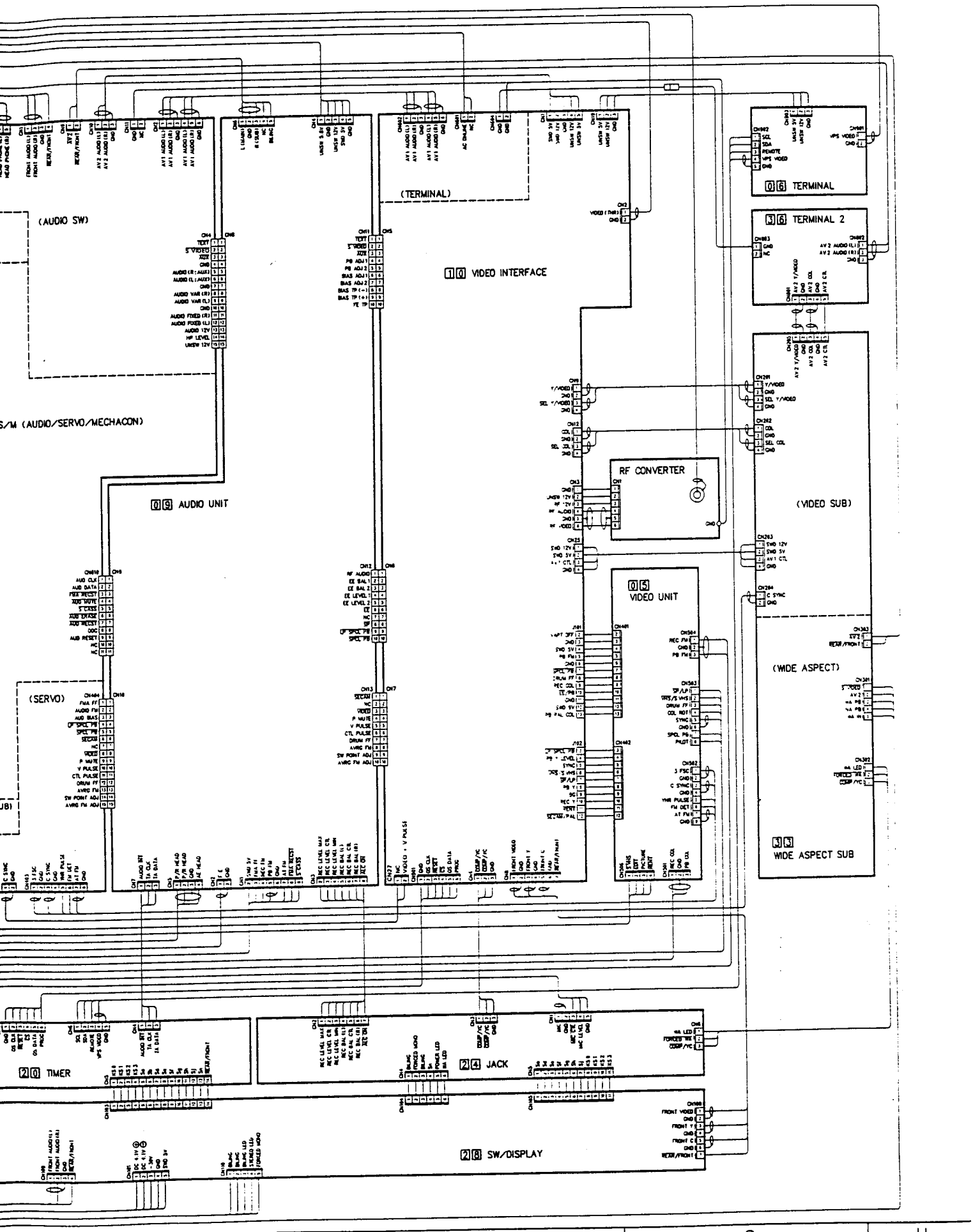
3.2.5 Signal flow in the schematic

Recording signal path
Playback signal path
REC/PB signal path

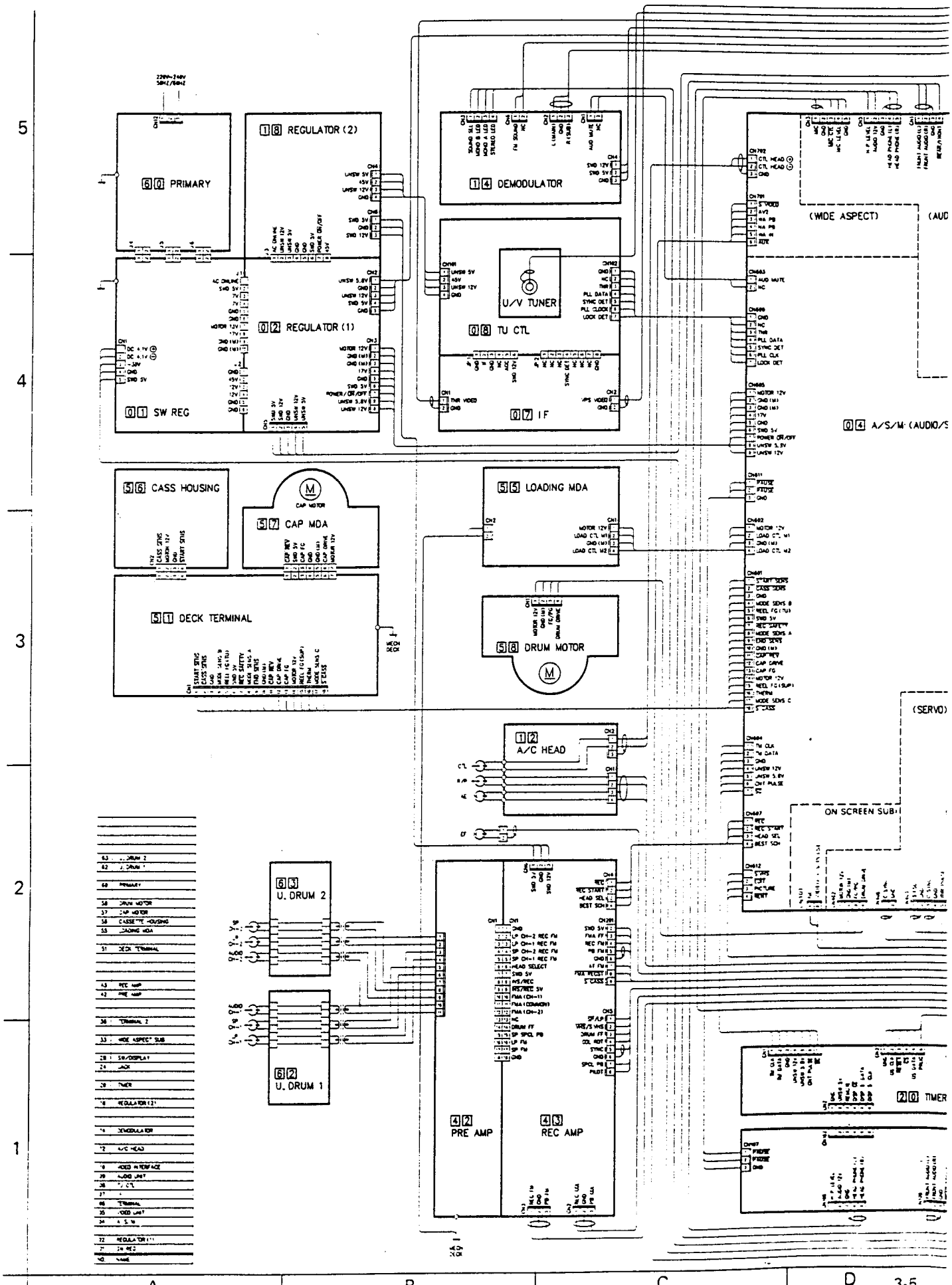
3.3 BOARD INTERCONNECTION (E/EG Only)



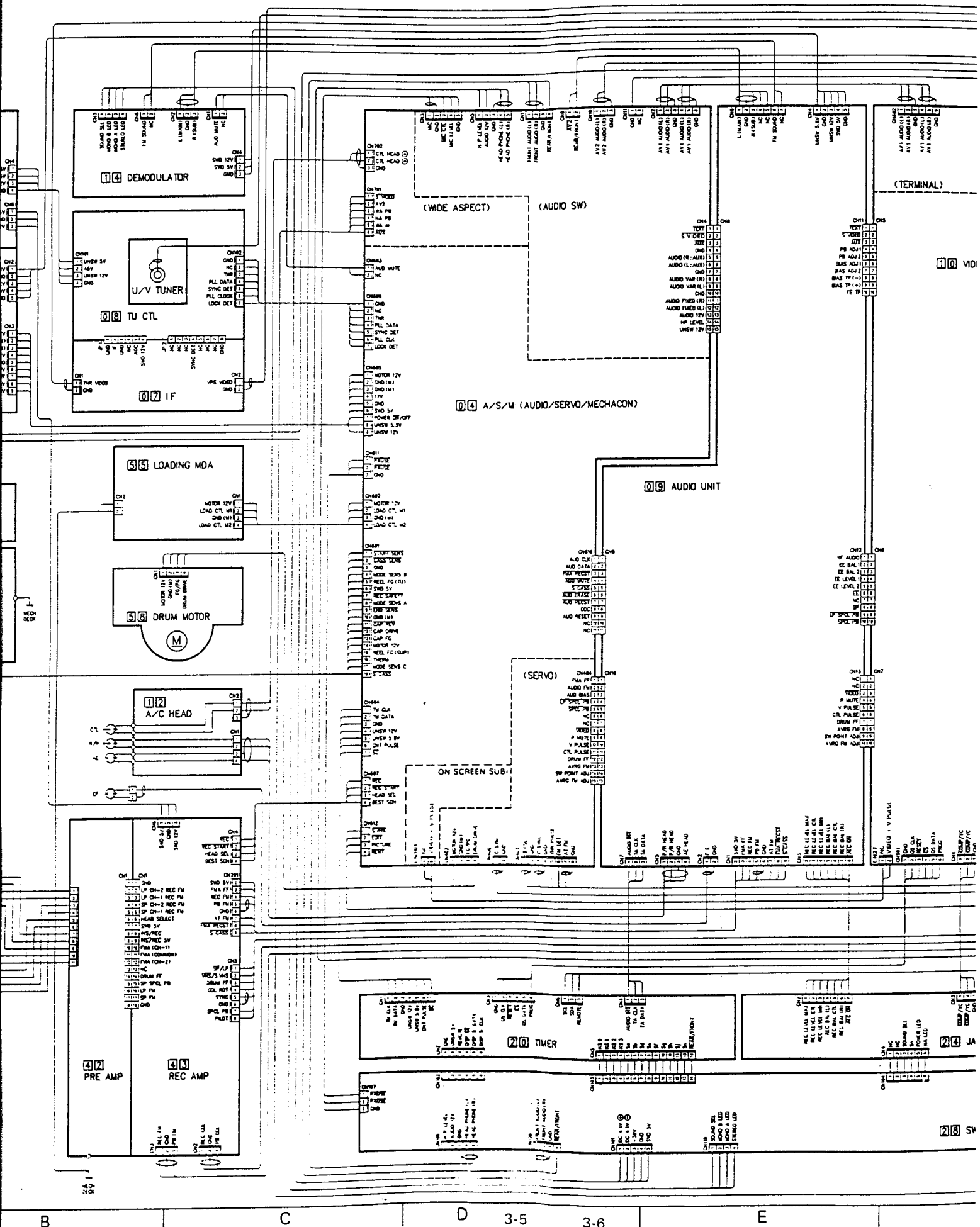

14 DEMODULATOR
U/V TUNER
08 TU CTL
07 IF
04 A/S/M (AUDIO/SERVO/MECHACON)
09 AUDIO UNIT
55 LOADING MDA
58 DRUM MOTOR
12 A/C HEAD
42 PRE AMP
43 REC AMP
20 TIMER
(WIDE ASPECT)
(AUDIO SW)
(TERMINAL)
(SERVO)
(ON SCREEN SUB)
B
C
D
3-3
3-4
E

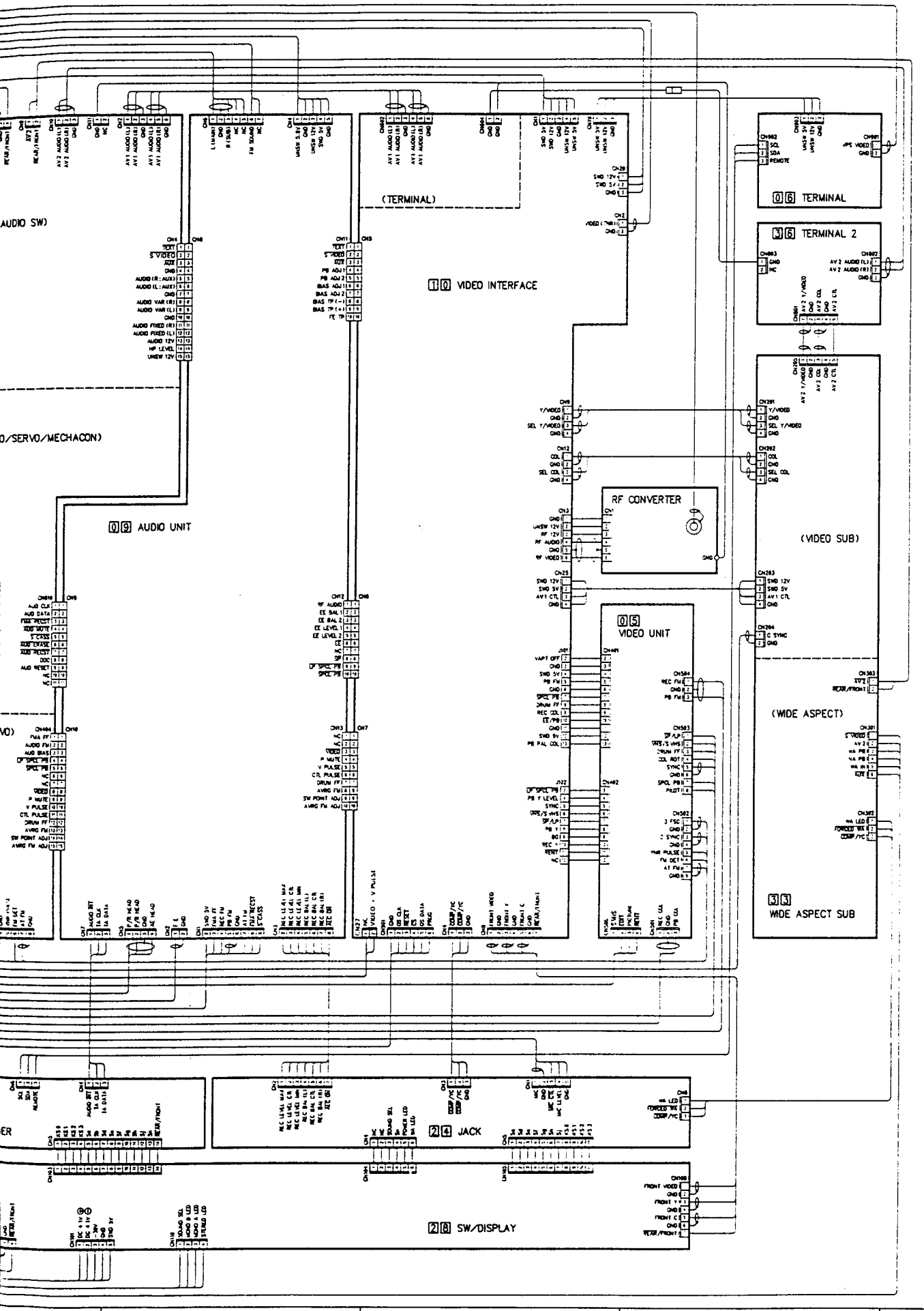

(AUDIO SW)
(TERMINAL)
10 VIDEO INTERFACE
06 TERMINAL
36 TERMINAL 2
S/M (AUDIO/SERVO/MECHACON)
09 AUDIO UNIT
RF CONVERTER
(VIDEO SUB)
05 VIDEO UNIT
(SERVO)
(WIDE ASPECT)
43 WIDE ASPECT SUB
20 TIMER
24 JACK
28 SW/DISPLAY

3.4 BOARD INTERCONNECTION (EK Only)

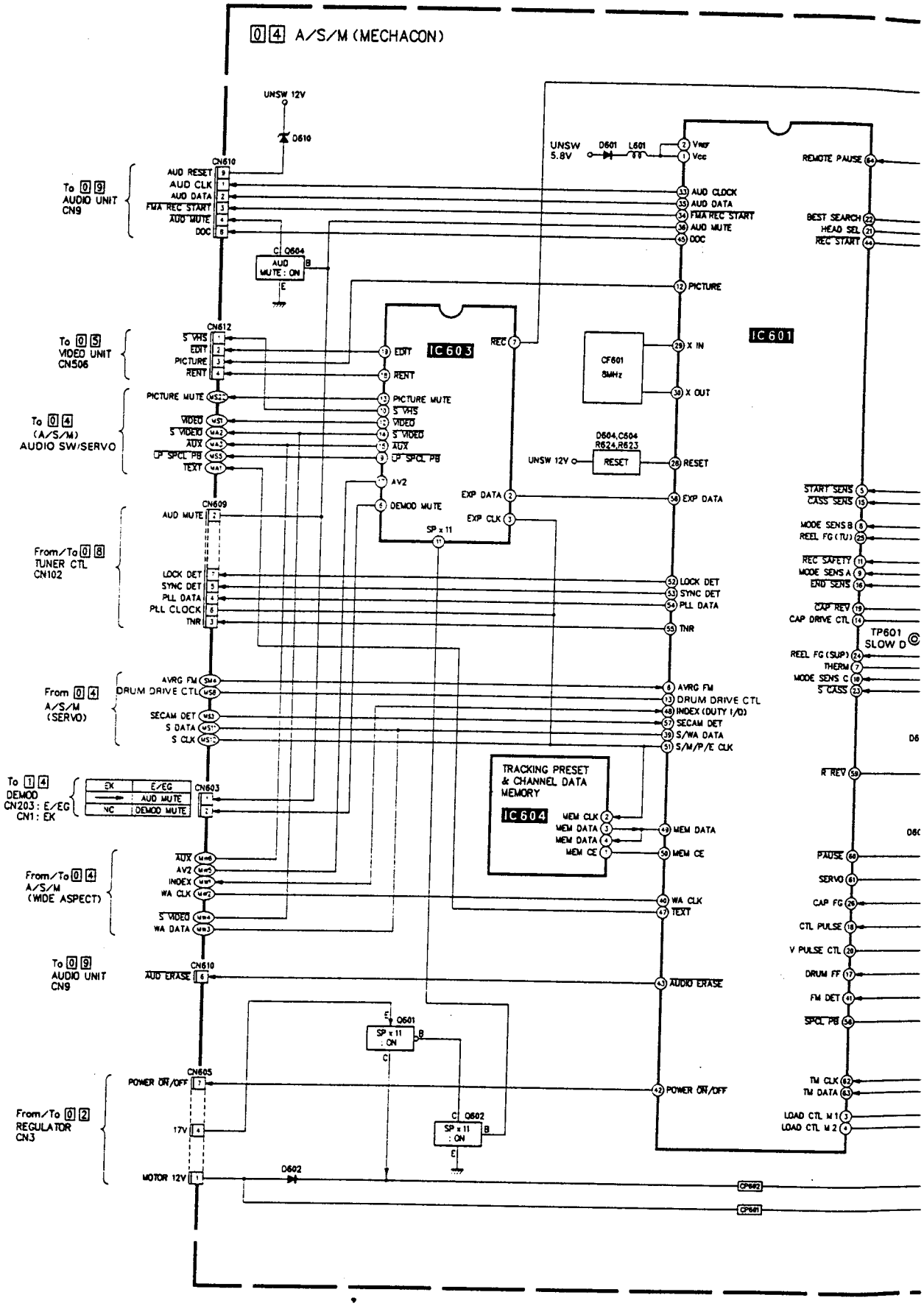


EK Only)

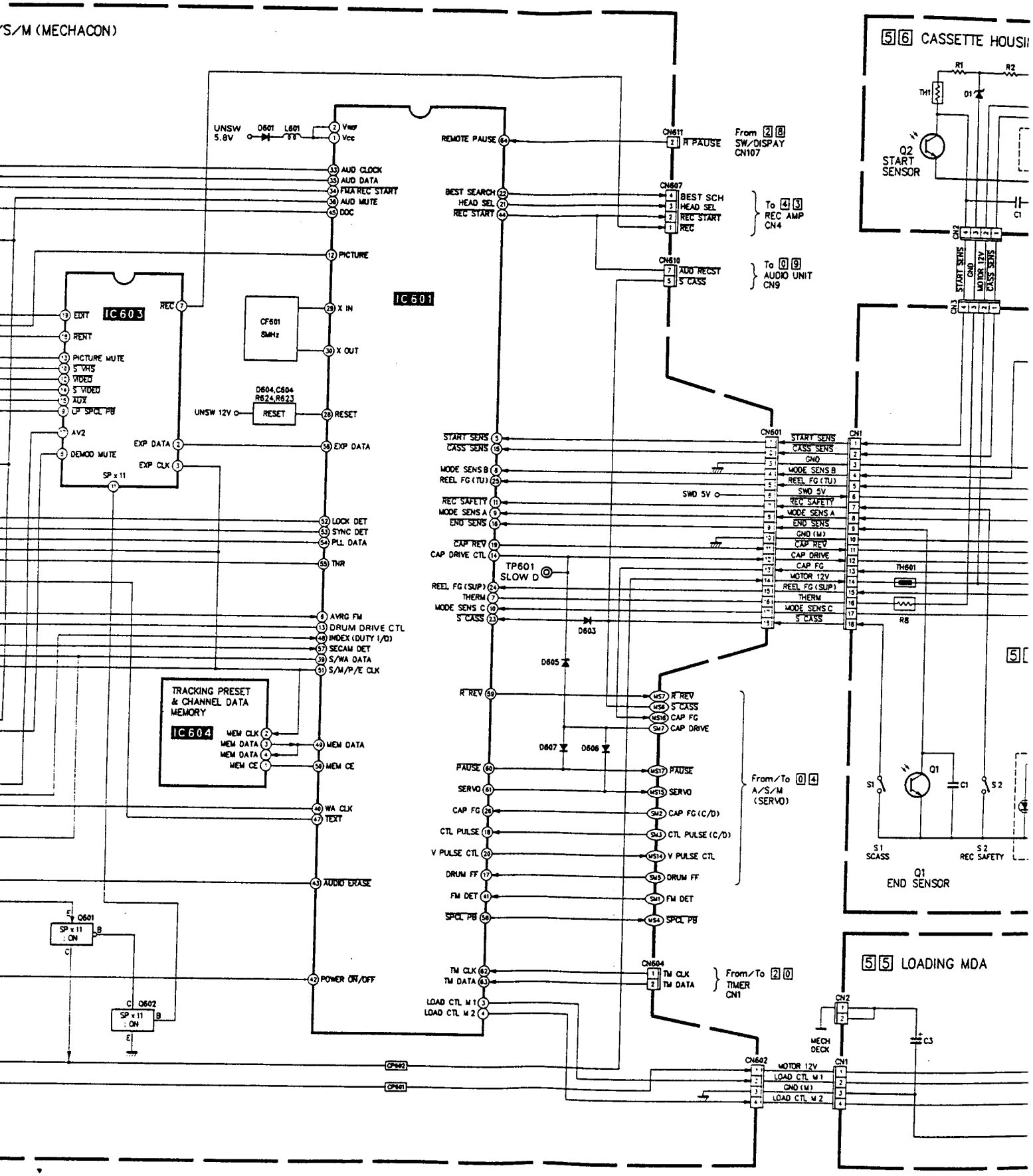

14 DEMODULATOR
U/V TUNER
08 TU CTL
07 IF
55 LOADING MDA
58 DRUM MOTOR
12 A/C HEAD
42 PRE AMP
43 REC AMP
(WIDE ASPECT)
(AUDIO SW)
04 A/S/M (AUDIO/SERVO/MECHACON)
09 AUDIO UNIT
(SERVO)
ON SCREEN SUB
20 TIMER
(TERMINAL)

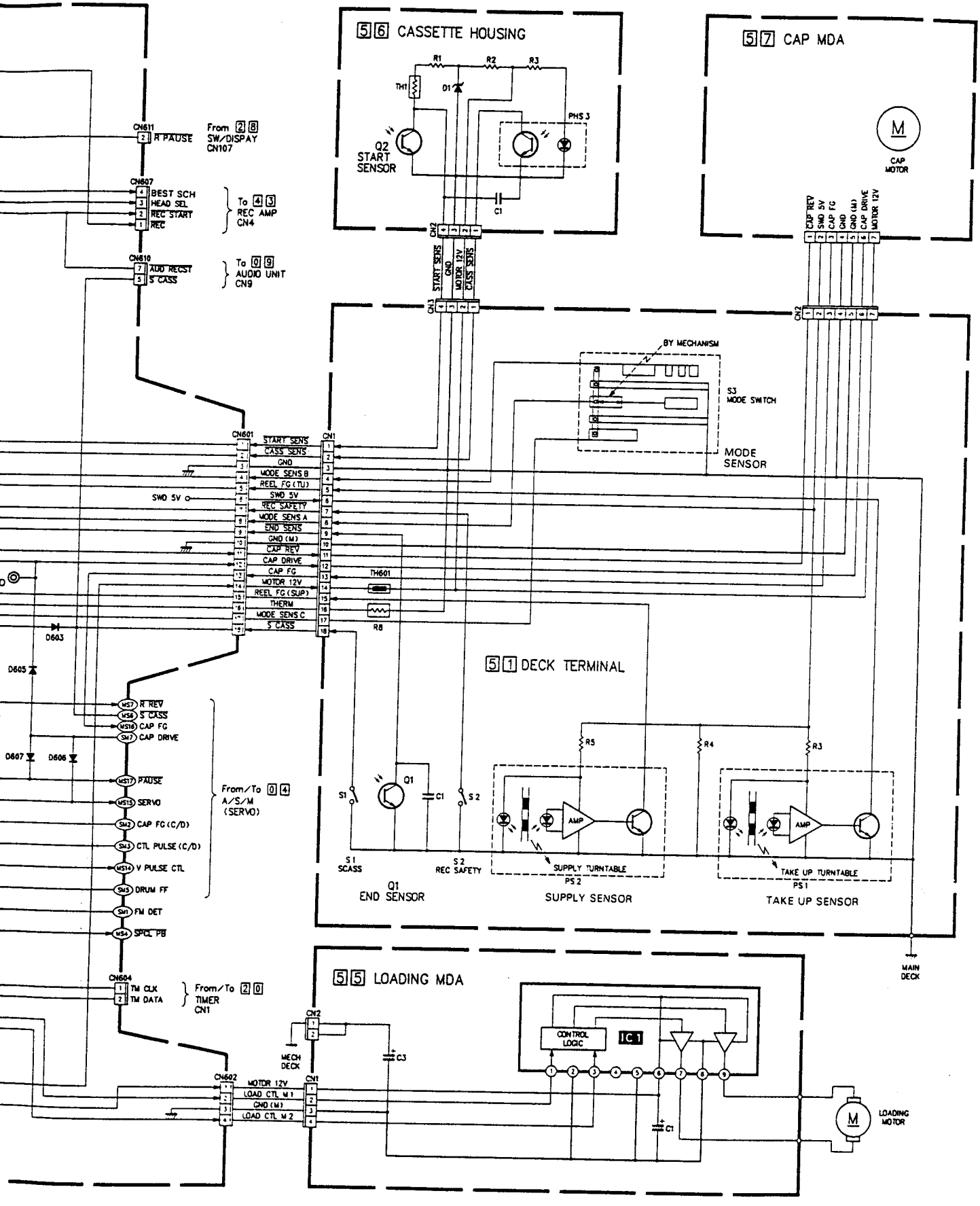

(TERMINAL)
10 VIDEO INTERFACE
09 AUDIO UNIT
RF CONVERTER
05 VIDEO UNIT
06 TERMINAL
36 TERMINAL 2
(VIDEO SUB)
(WIDE ASPECT)
33 WIDE ASPECT SUB
24 JACK
28 SW/DISPLAY

3.5 SYSTEM CONTROL (M-CTL) BLOCK DIAGRAM

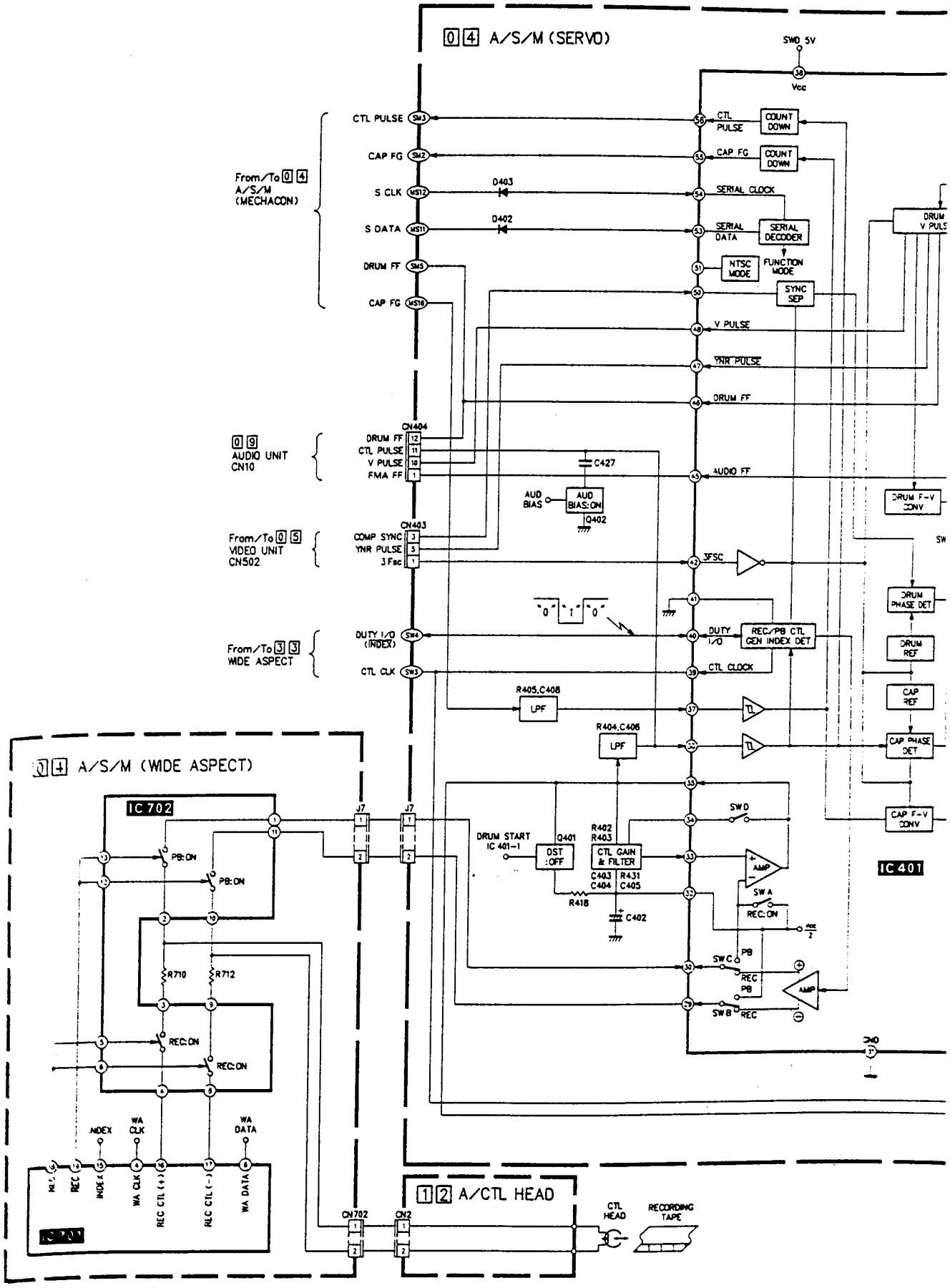


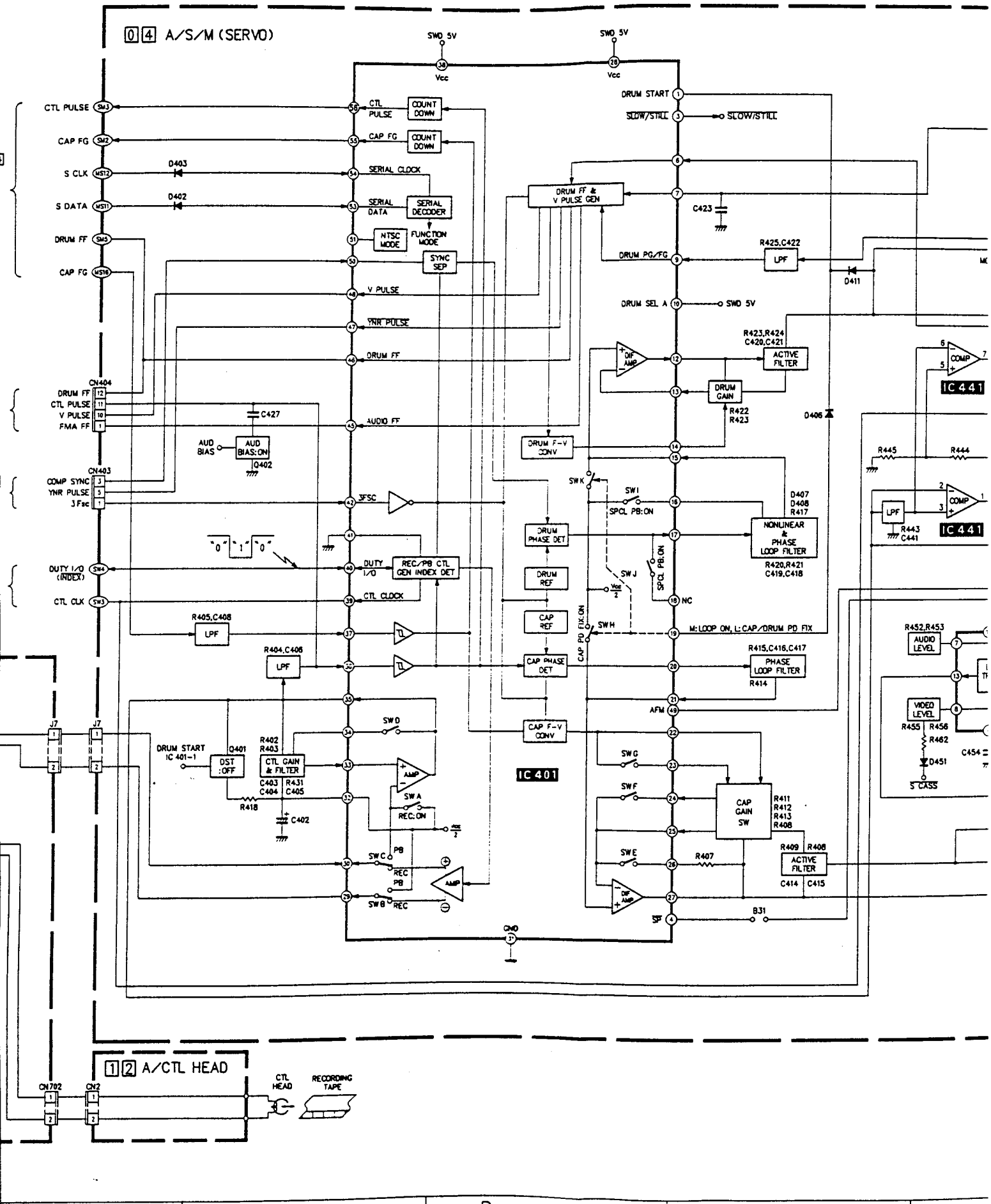
BLOCK DIAGRAM

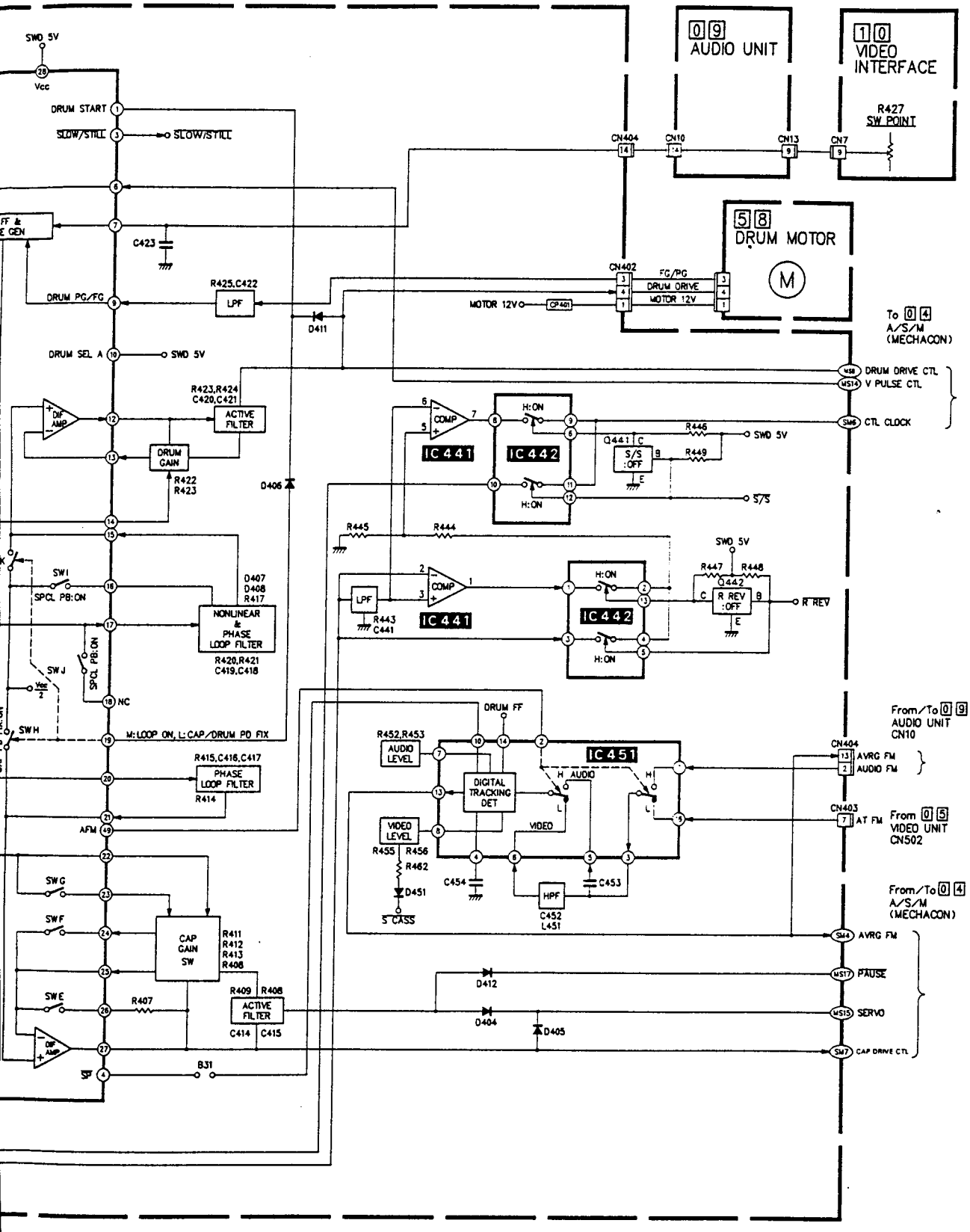



5 6 CASSETTE HOUSING
5 7 CAP MDA
5 1 DECK TERMINAL
5 5 LOADING MDA
Q2 START SENSOR
CAP MOTOR
BY MECHANISM
S3 MODE SWITCH
MODE SENSOR
Q1 END SENSOR
SUPPLY SENSOR
TAKE UP SENSOR
SUPPLY TURNTABLE
TAKE UP TURNTABLE
CONTROL LOGIC
IC1
LOADING MOTOR
MAIN DECK
From 2 8 SW/DISPAY CN107
To 4 3 REC AMP CN4
To 0 9 AUDIO UNIT CN9
From/To 0 4 A/S/M (SERVO)
From/To 2 0 TIMER CN1

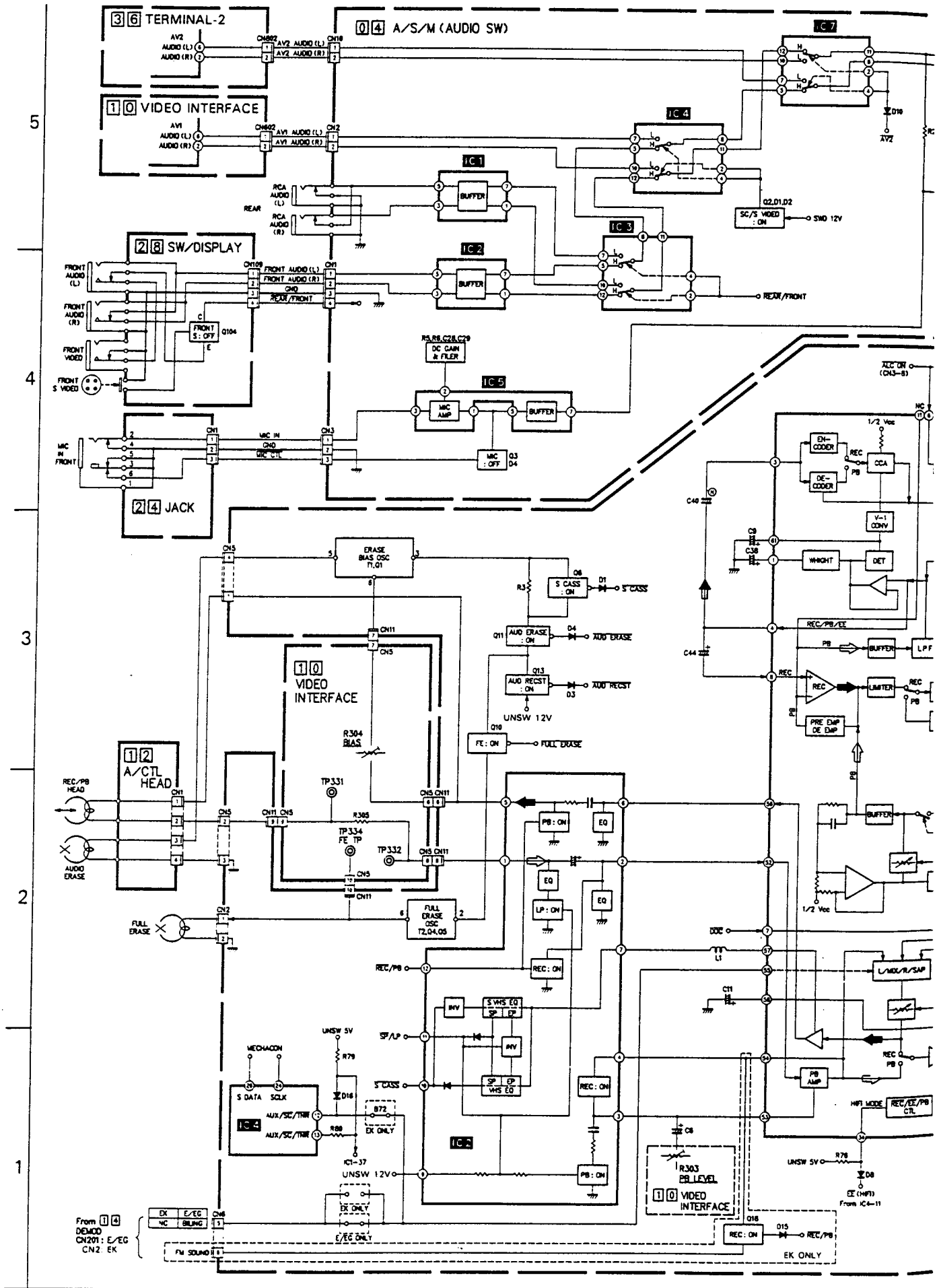
SERVO BLOCK DIAGRAM

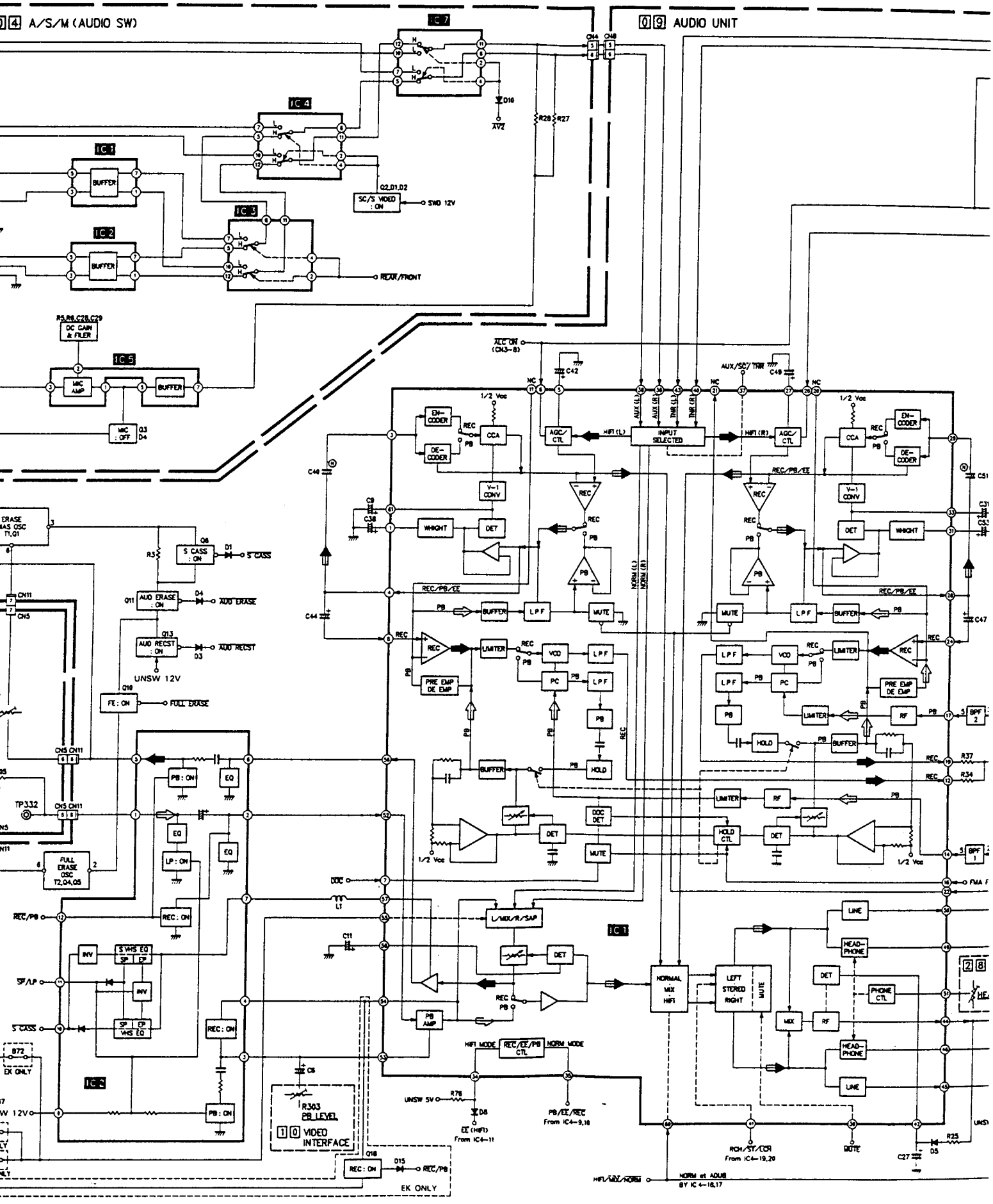



0 4 A/S/M (SERVO)
SWD 5V
Vcc
CTL PULSE
CAP FG
S CLK
S DATA
DRUM FF
CAP FG
D403
D402
CTL PULSE
COUNT DOWN
CAP FG
COUNT DOWN
SERIAL CLOCK
SERIAL DATA
SERIAL DECODER
NTSC MODE
FUNCTION MODE
SYNC SEP
V PULSE
YNR PULSE
DRUM FF
AUDIO FF
3FSC
DUTY I/O
REC/PB CTL GEN INDEX DET
CTL CLOCK
DRUM START
SLOW/STILL
DRUM FF & V PULSE GEN
C423
DRUM PG/FG
R425,C422
LPF
D411
DRUM SEL A
SWD 5V
R423,R424
C420,C421
ACTIVE FILTER
DIF AMP
DRUM GAIN
R422
R423
D406
DRUM F-V CONV
SWK
SWI
SPCL PB:ON
D407
D408
R417
NONLINEAR & PHASE LOOP FILTER
R420,R421
C419,C418
DRUM PHASE DET
DRUM REF
CAP REF
SWJ
SPCL PB:ON
NC
SWH
CAP PD FIX:ON
M:LOOP ON, L:CAP/DRUM PD FIX
CAP PHASE DET
R415,C416,C417
PHASE LOOP FILTER
R414
AFM
CAP F-V CONV
IC 401
SWD
SWA
REC:ON
SWC
PB
REC
SWB
AMP
SWG
SWF
SWE
CAP GAIN SW
R411
R412
R413
R408
R407
R409
R408
ACTIVE FILTER
C414
C415
SP
B31
GND
CN404
DRUM FF
CTL PULSE
V PULSE
FMA FF
C427
AUD BIAS
AUD BIAS:ON
Q402
CN403
COMP SYNC
YNR PULSE
3Fsc
"0" "1" "0"
R405,C408
LPF
R404,C406
LPF
J7
DRUM START
IC 401-1
Q401
DST :OFF
R402
R403
CTL GAIN & FILTER
C403
C404
R431
C405
R418
C402
R445
R444
LPF
R443
C441
COMP
IC 441
R452,R453
AUDIO LEVEL
VIDEO LEVEL
R455
R456
R462
D451
S CASS
C454
1 2 A/CTL HEAD
CN702
CN2
CTL HEAD
RECORDING TAPE

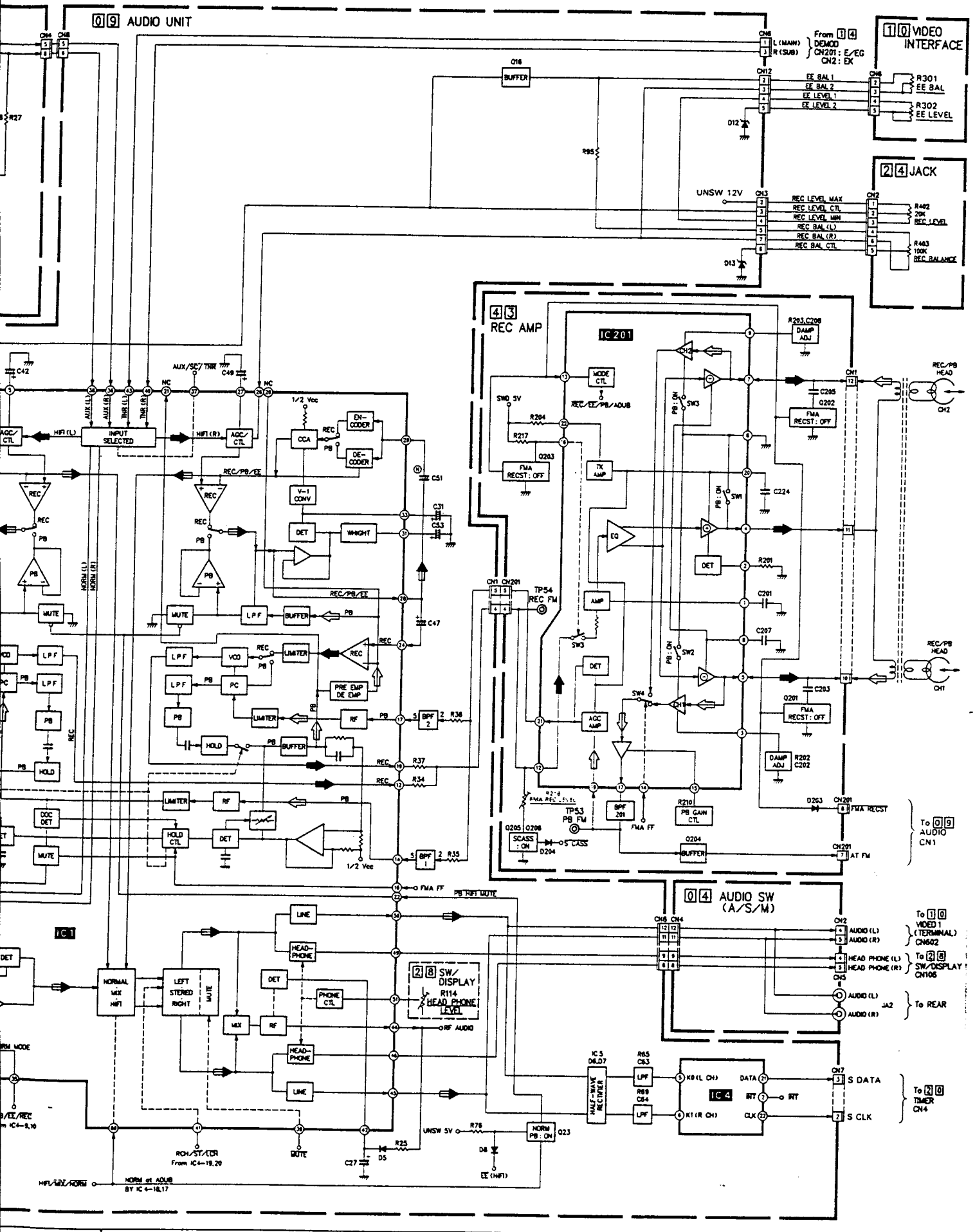

09 AUDIO UNIT
10 VIDEO INTERFACE
R427 SW POINT
58 DRUM MOTOR
CN404
CN10
CN13
CN7
CN402
FG/PG
DRUM DRIVE
MOTOR 12V
SWD 5V
Vcc
DRUM START
SLOW/STILL
C423
DRUM PG/FG
R425,C422
LPF
D411
DRUM SEL A
To 04 A/S/M (MECHACON)
DRUM DRIVE CTL
V PULSE CTL
CTL CLOCK
R423,R424 C420,C421
ACTIVE FILTER
DIF AMP
DRUM GAIN
R422 R423
D406
COMP
IC441
IC442
H:ON
Q441
S/S :OFF
R446
R449
S/S
R445
R444
SW1
SPCL PB:ON
D407 D408 R417
NONLINEAR & PHASE LOOP FILTER
R420,R421 C419,C418
SWJ
NC
SWH
M:LOOP ON, L:CAP/DRUM PD FIX
R415,C416,C417
PHASE LOOP FILTER
R414
AFM
LPF
R443 C441
Q442
R REV :OFF
R REV
R447
R448
DRUM FF
R452,R453
AUDIO LEVEL
DIGITAL TRACKING DET
IC451
H AUDIO
VIDEO
VIDEO LEVEL
R455
R456
R462
D451
S CASS
C454
C453
HPF
C452
L451
From/To 09 AUDIO UNIT CN10
AVRG FM
AUDIO FM
CN403
AT FM
From 05 VIDEO UNIT CN502
From/To 04 A/S/M (MECHACON)
SWG
SWF
SWE
CAP GAIN SW
R411
R412
R413
R408
R409
R406
R407
ACTIVE FILTER
C414
C415
D412
D404
D405
PAUSE
SERVO
CAP DRIVE CTL
SP
B31

3.7 AUDIO BLOCK DIAGRAM

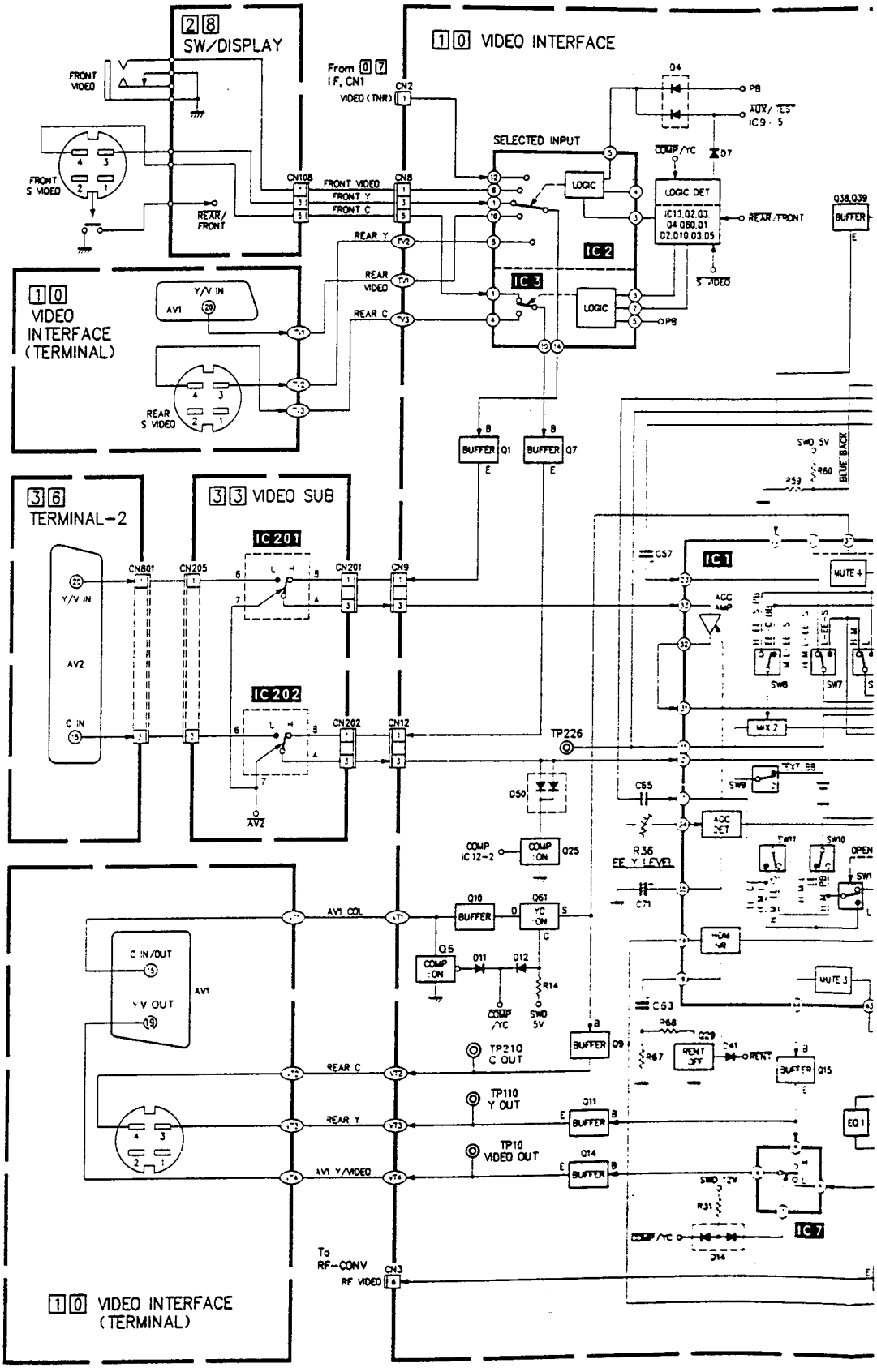



04 A/S/M (AUDIO SW)
09 AUDIO UNIT
IC 7
IC 4
IC 1
IC 3
IC 2
IC 5
BUFFER
MIC AMP
SC/S VIDEO : ON
REAR/FRONT
DC GAIN & FILER
MIC : OFF
ALC ON (CN3-8)
EN-CODER
DE-CODER
CCA
V-1 CONV
WHIGHT
DET
AGC/CTL
INPUT SELECTED
HIFI (L)
HIFI (R)
REC/PB/EE
MUTE
LPF
BUFFER
LIMITER
VCO
PC
PRE EMP DE EMP
HOLD
RF
DOC DET
HOLD CTL
L/MIX/R/SAP
PB AMP
NORMAL MIX HIFI
LEFT STEREO RIGHT
HEAD-PHONE
PHONE CTL
LINE
S CASS : ON
AUD ERASE : ON
AUD RECST : ON
UNSW 12V
FE : ON
FULL ERASE
FULL ERASE OSC T2,04,05
PB : ON
EQ
LP : ON
REC : ON
INV
S VHS EQ
SP
EP
SP/LP
S CASS
EK ONLY
R303 PB LEVEL
10 VIDEO INTERFACE
HIFI MODE
REC/EE/PB CTL
NORM MODE
UNSW 5V
EE (HIFI) From IC4-11
PB/EE/REC From IC4-9,10
RCH/ST/CCR From IC4-19,20
MUTE
NORM at AOUB BY IC 4-16,17
REC/PB
EK ONLY

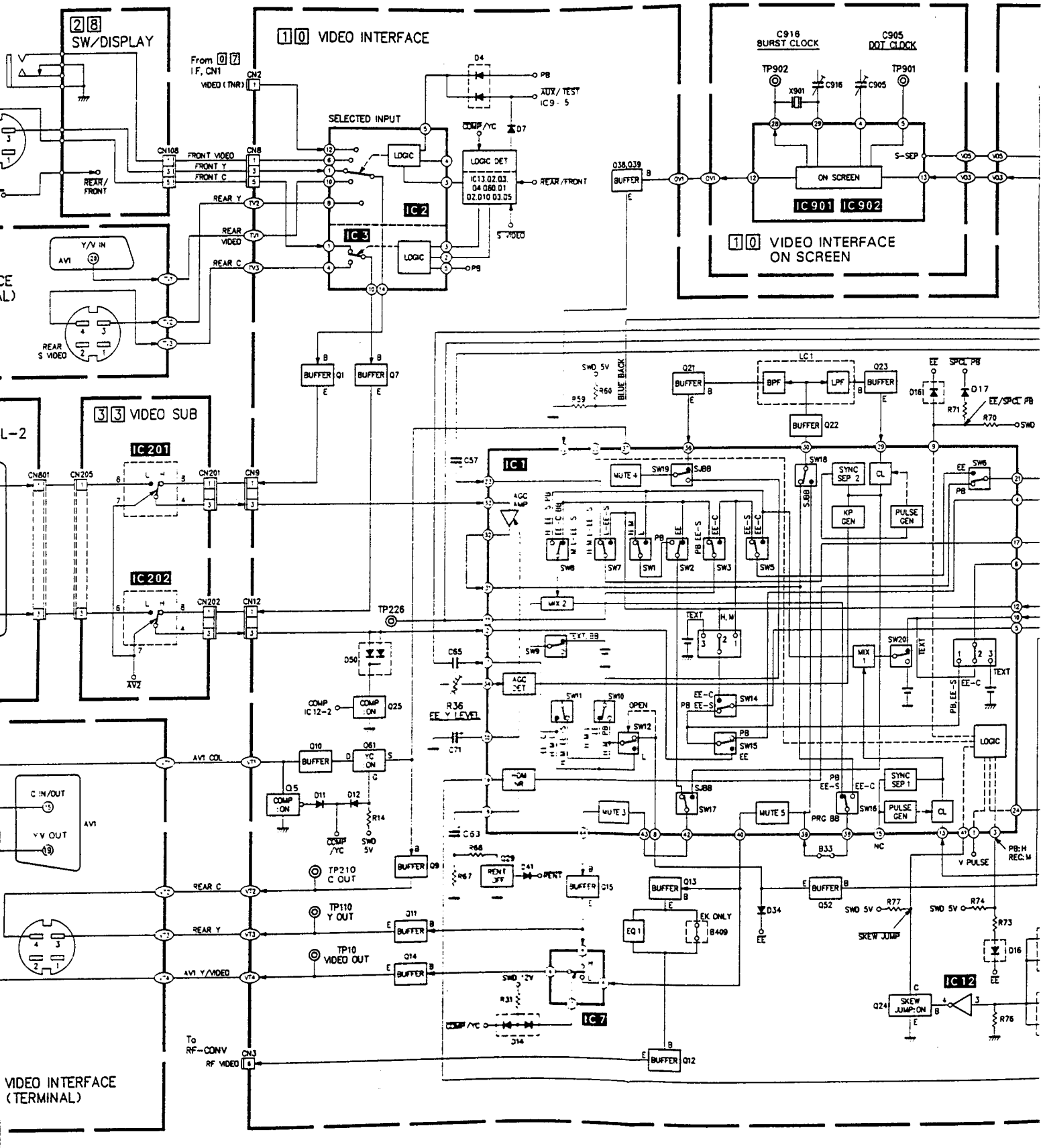
B	C	D	3-11	3-12	E

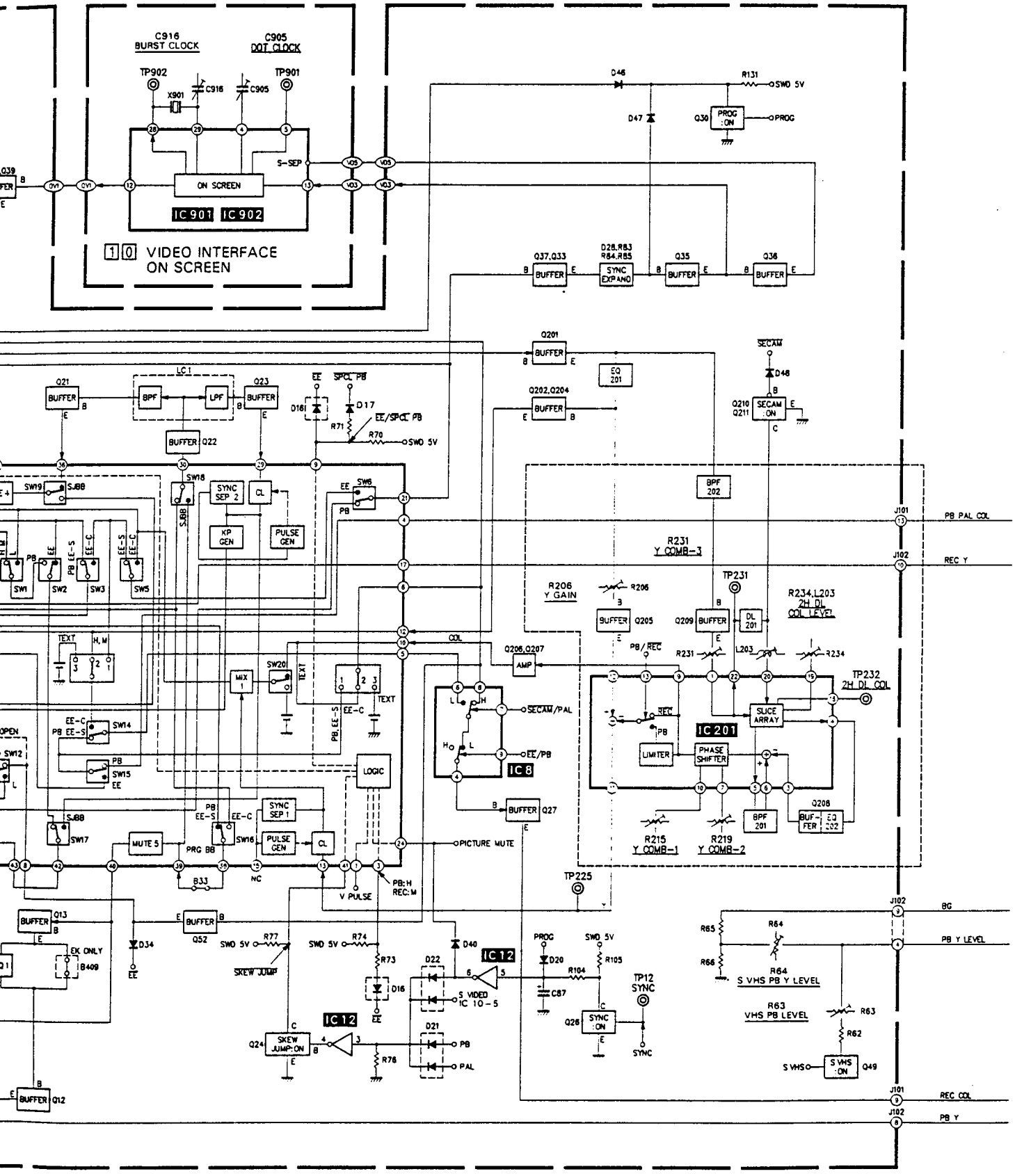

09 AUDIO UNIT
10 VIDEO INTERFACE
24 JACK
43 REC AMP
IC201
04 AUDIO SW (A/S/M)
IC1
IC4
28 SW/DISPLAY
R114 HEAD PHONE LEVEL
From 14 DEMOD CN201 : E/EG CN2 : EK
R301 EE BAL
R302 EE LEVEL
R402 20K REC LEVEL
R403 100K REC BALANCE
REC/PB HEAD
CH1
CH2
TP54 REC FM
TP53 PB FM
To 09 AUDIO CN1
To 10 VIDEO 1 (TERMINAL) CN602
To 28 SW/DISPLAY CN105
To REAR
To 20 TIMER CN4
S DATA
S CLK
INPUT SELECTED
EN-CODER
DE-CODER
HALF-WAVE RECTIFIER
NORMAL MIX HIFI
LEFT STEREO RIGHT
HEAD-PHONE
PHONE CTL
LINE
MUTE
BUFFER
LIMITER
HOLD
DET
MODE CTL
TK AMP
EQ
AMP
AGC AMP
PB GAIN CTL
SCASS : ON
FMA RECST : OFF
DAMP ADJ
REC/EE/PB/AOUB
REC/PB/EE
HIFI/MIX/NORM
RCH/ST/ECR
NORM at AOUB
EE (HIFI)
FMA FF
PB HIFI MUTE
RF AUDIO

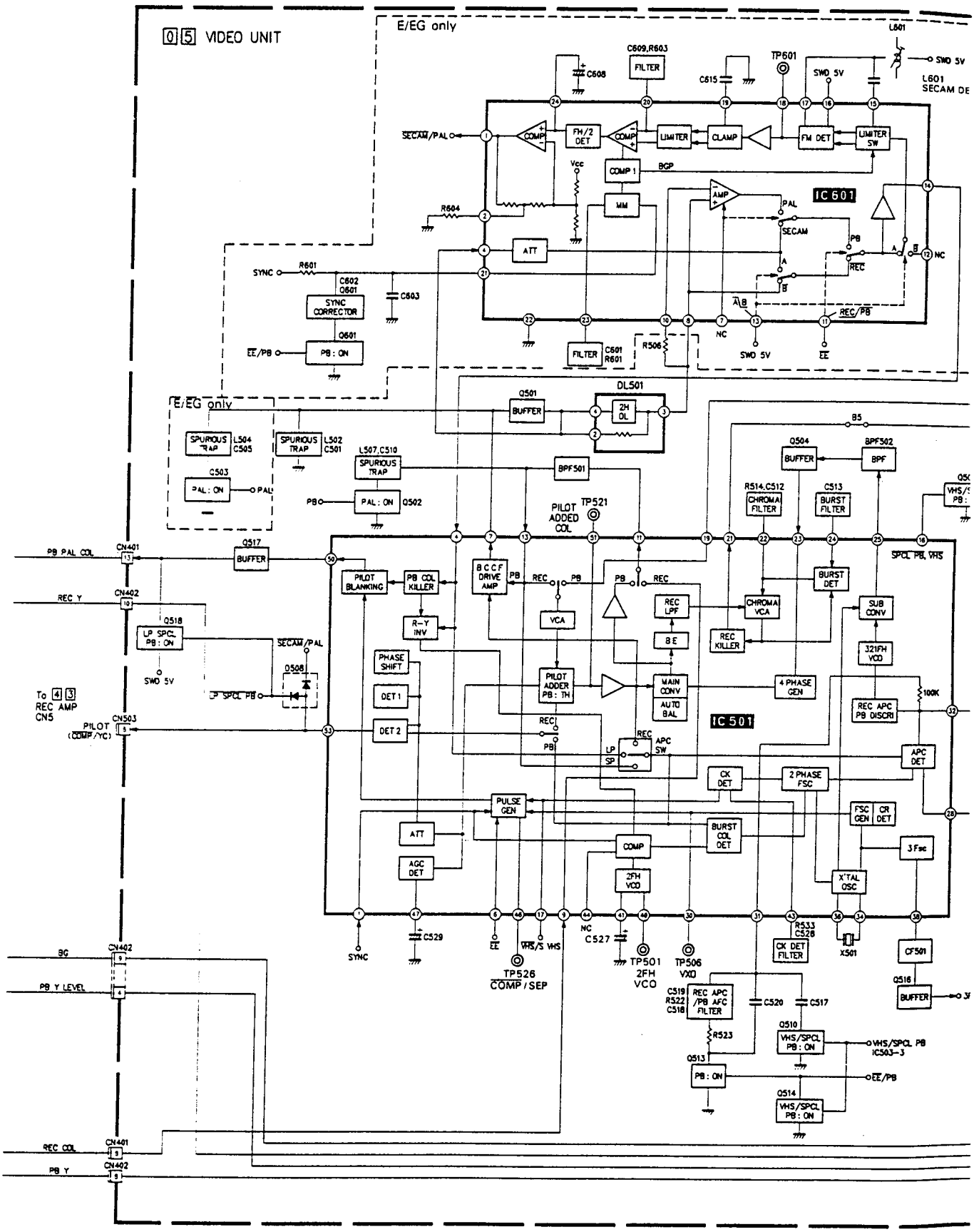
3.8 VIDEO & VIDEO UNIT BLOCK DIAGRAM

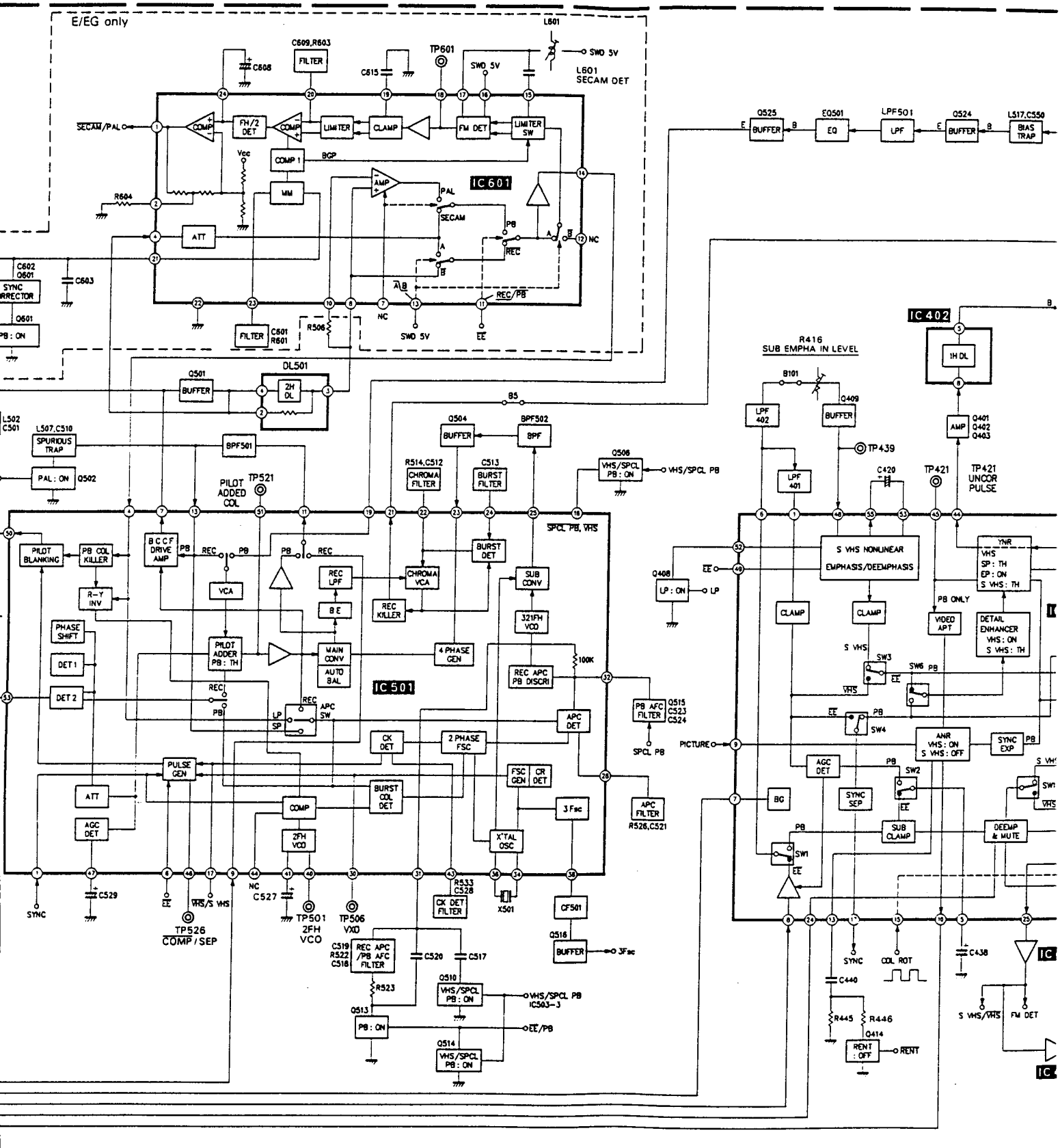


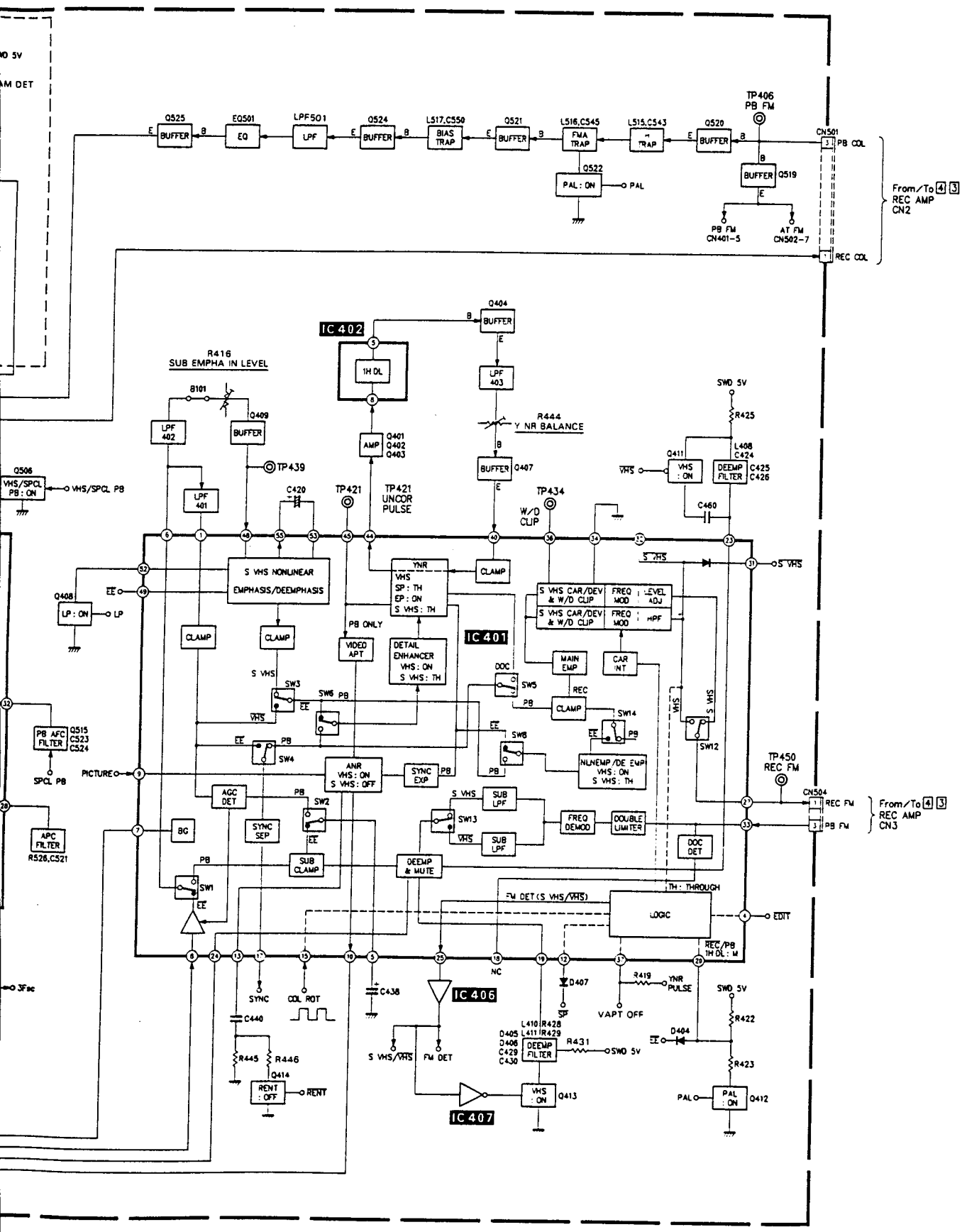
LOCK DIAGRAM



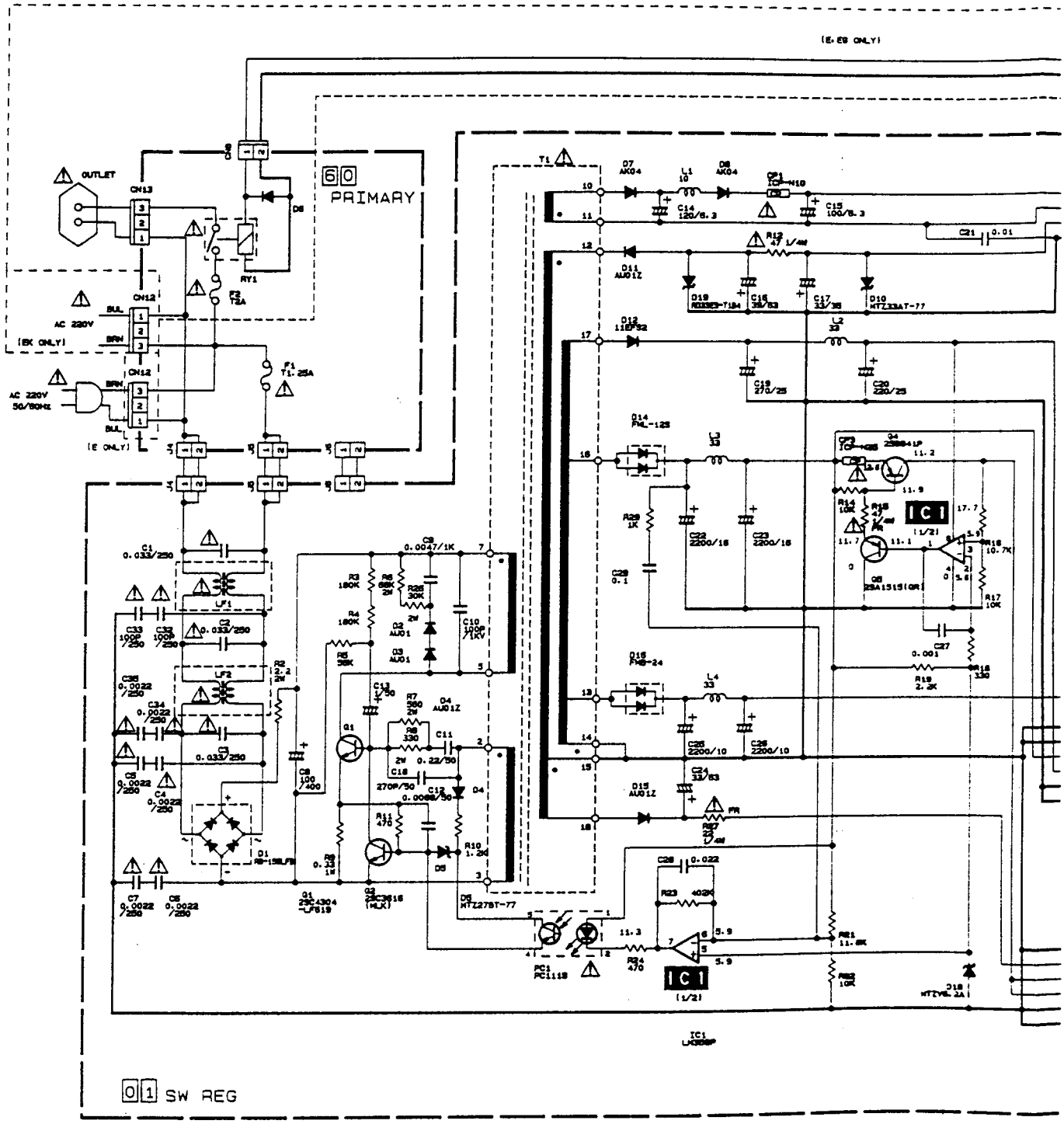

C916
BURST CLOCK
C905
DOT CLOCK
TP902
TP901
X901
C916
C905
ON SCREEN
IC 901
IC 902
10 VIDEO INTERFACE
ON SCREEN
S-SEP
D46
D47
R131
5WD 5V
Q30
PROG :ON
PROG
Q37,Q33
BUFFER
D28,R83
R84,R85
SYNC EXPAND
Q35
BUFFER
Q36
BUFFER
Q201
BUFFER
EQ 201
Q202,Q204
BUFFER
SECAM
D48
Q210
Q211
SECAM :ON
LC1
Q21
BUFFER
BPF
LPF
Q23
BUFFER
BUFFER Q22
EE
SPCL PB
D161
D17
EE/SPCL PB
R71
R70
5WD 5V
SW19
SJ88
SW18
SYNC SEP 2
CL
EE
SW6
PB
KP GEN
PULSE GEN
BPF 202
J101
PB PAL COL
R231
Y COMB-3
J102
REC Y
SW1
SW2
SW3
SW5
R206
Y GAIN
R206
TP231
R234,L203
2H DL
COL LEVEL
BUFFER Q205
Q209
BUFFER
DL 201
TEXT
H,M
COL
Q206,Q207
AMP
PB/REC
R231
L203
R234
TP232
2H DL COL
MIX 1
SW20
TEXT
EE-C
PB EE-S
SW14
SW15
LOGIC
SECAM/PAL
EE/PB
IC 8
SLICE ARRAY
IC 201
LIMITER
PHASE SHIFTER
BUFFER Q27
BPF 201
Q208
BUF-FER
EQ 202
R215
Y COMB-1
R219
Y COMB-2
SJ88
SW17
MUTE 5
PRG BB
SW16
SYNC SEP 1
PULSE GEN
CL
PICTURE MUTE
B33
NC
V PULSE
PB:H
REC:M
TP225
J102
BG
PB Y LEVEL
R65
R64
R66
R64
S VHS PB Y LEVEL
R63
VHS PB LEVEL
R63
R62
S VHS
S VHS :ON
Q49
BUFFER Q13
BUFFER Q52
EK ONLY
B409
D34
EE
SWD 5V
R77
SKEW JUMP
SWD 5V
R74
R73
D16
EE
D40
IC 12
D22
S VIDEO IC 10-5
PROG
SWD 5V
D20
R104
R105
C87
TP12 SYNC
Q26
SYNC :ON
SYNC
IC 12
Q24
SKEW JUMP:ON
R76
D21
PB
PAL
BUFFER Q12
J101
REC COL
J102
PB Y

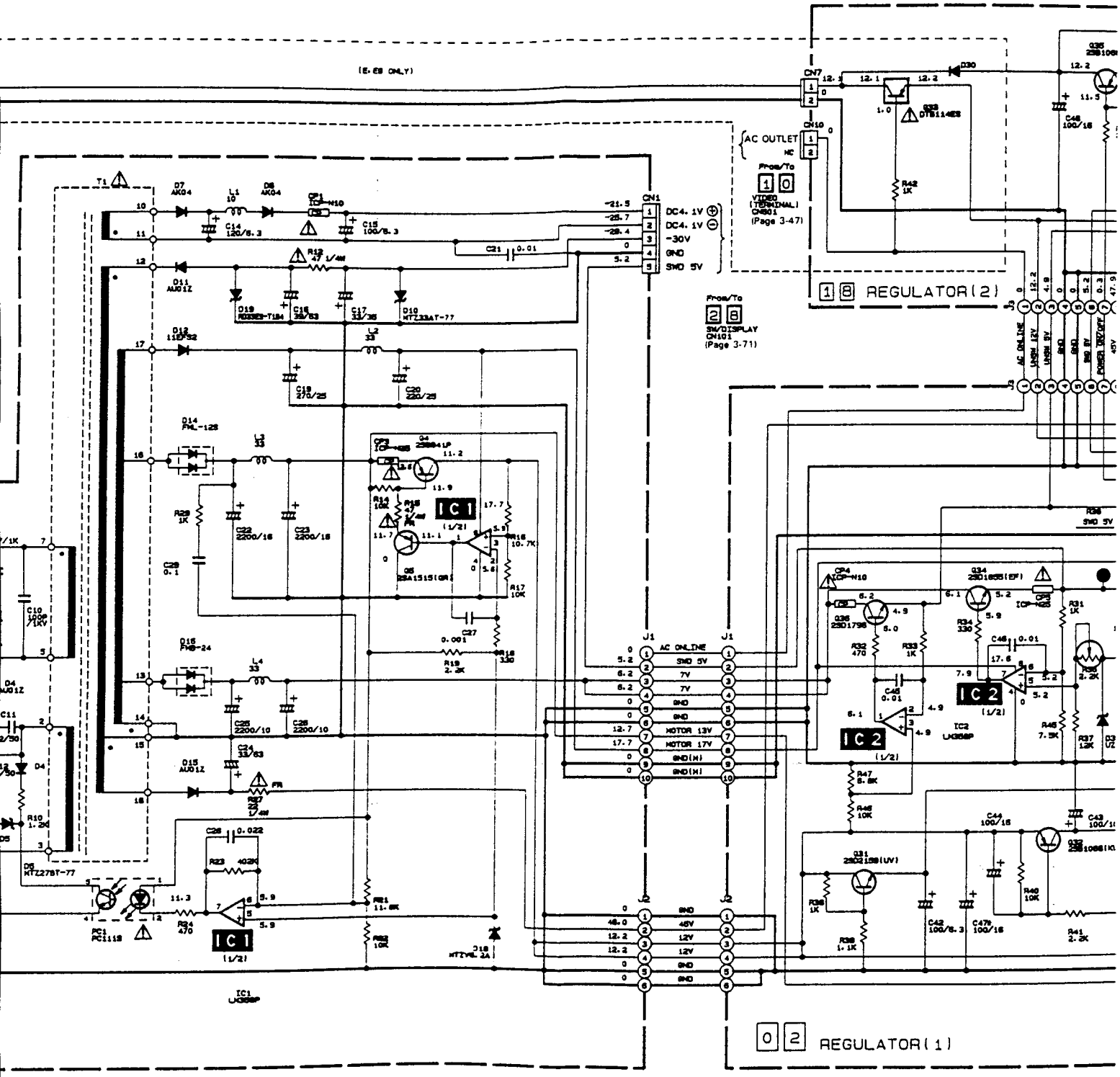

05 VIDEO UNIT
E/EG only
L601
SWD 5V
L601
SECAM DE
C609,R603
FILTER
C608
TP601
C615
SWD 5V
SECAM/PAL
FM/2 DET
COMP
LIMITER
CLAMP
FM DET
LIMITER SW
Vcc
COMP 1
BGP
IC601
AMP
PAL
SECAM
PB
REC
NC
R604
MM
ATT
SYNC
R601
C602
Q601
SYNC CORRECTOR
C603
EE/PB
PB : ON
FILTER
C601
R601
R506
SWD 5V
EE
REC/PB
E/EG only
Q501
BUFFER
DL501
2H DL
SPURIOUS TRAP
L504
C505
SPURIOUS TRAP
L502
C501
L507,C510
SPURIOUS TRAP
Q503
PAL : ON
PAL
PB
PAL : ON
Q502
BPF501
B5
Q504
BUFFER
BPF502
BPF
R514,C512
CHROMA FILTER
C513
BURST FILTER
PILOT ADDED COL
TP521
PB PAL COL
CN401
Q517
BUFFER
REC Y
CN402
PILOT BLANKING
PB COL KILLER
B C C F DRIVE AMP
PB
REC
VCA
R-Y INV
REC LPF
B E
REC KILLER
CHROMA VCA
BURST DET
SUB CONV
SPCL PB, VHS
Q518
LP SPCL PB : ON
SWD 5V
SECAM/PAL
Q508
LP SPCL PB
PHASE SHIFT
DET 1
DET 2
PILOT ADDER PB : TH
MAIN CONV
AUTO BAL
IC501
4 PHASE GEN
321FH VCO
100K
REC APC PB DISCRI
To 4 3
REC AMP
CN5
PILOT (COMP/YC)
CN503
REC
PB
LP
SP
APC SW
APC DET
CK DET
2 PHASE FSC
PULSE GEN
FSC GEN
CR DET
ATT
AGC DET
COMP
BURST COL DET
3Fsc
2FH VCO
X'TAL OSC
SYNC
C529
EE
VHS/S VHS
TP526
COMP/SEP
NC
C527
TP501
2FH VCO
TP506
VXO
R533
C528
CK DET FILTER
X501
CF501
BG
CN402
PB Y LEVEL
REC APC /PB AFC FILTER
C519
R522
C518
C520
C517
Q516
BUFFER
R523
Q510
VHS/SPCL PB : ON
VHS/SPCL PB IC503-3
Q513
PB : ON
EE/PB
Q514
VHS/SPCL PB : ON
REC COL
CN401
PB Y
CN402

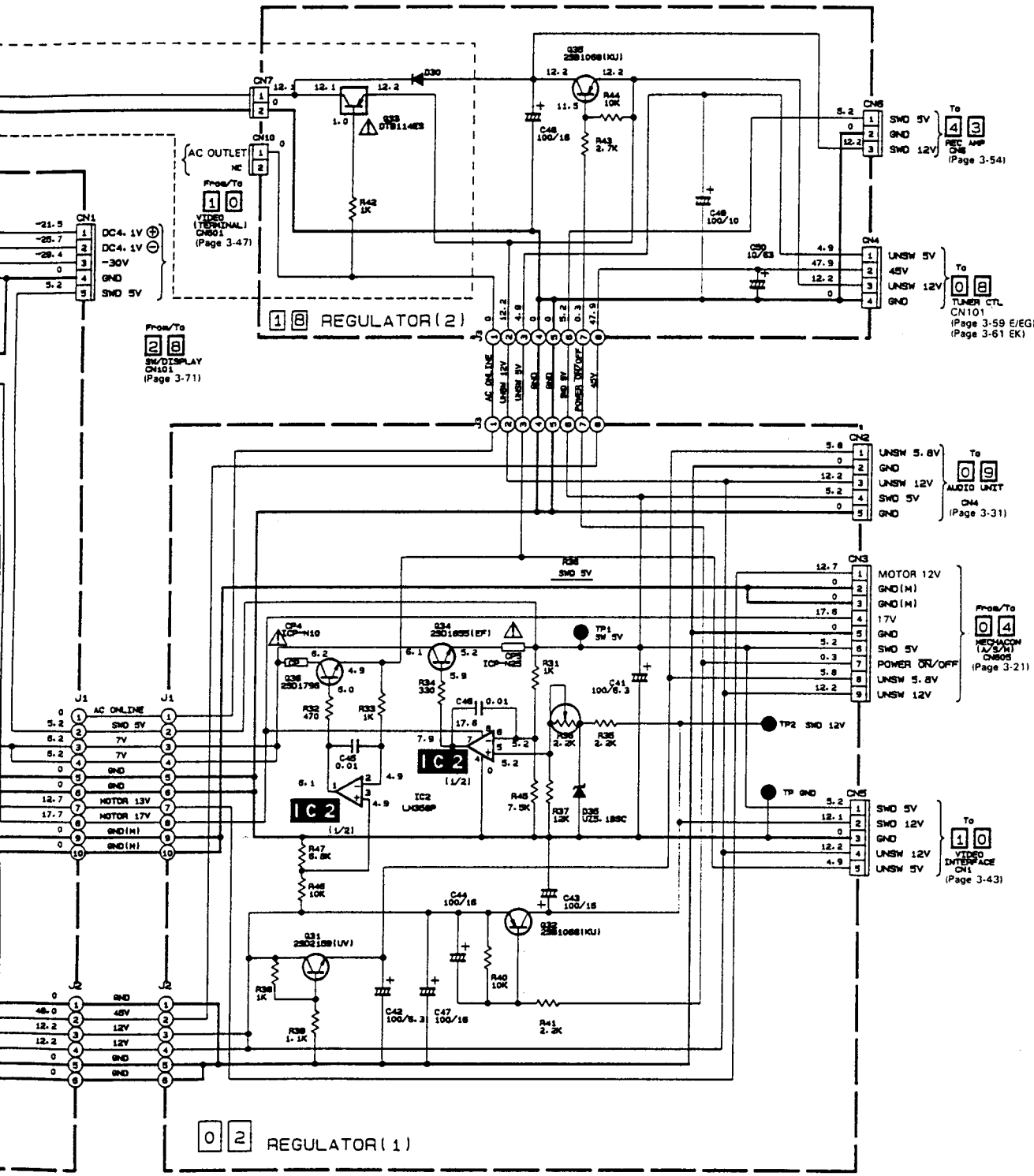

E/EG only
L601
SECAM DET
IC 601
IC 501
IC 402
DL501
2H DL
1H DL
SECAM/PAL
COMP
FM/2 DET
LIMITER
CLAMP
FM DET
LIMITER SW
COMP 1
BGP
MM
AMP
ATT
PAL
SECAM
PB
REC
REC/PB
NC
SWD 5V
EE
FILTER
C601
R601
R506
C602
Q601
SYNC CORRECTOR
C603
PB : ON
Q501
BUFFER
L502
C501
L507,C510
SPURIOUS TRAP
BPF501
PAL : ON
Q502
PILOT ADDED COL
TP521
Q504
BPF502
BPF
R514,C512
CHROMA FILTER
C513
BURST FILTER
Q506
VHS/SPCL PB : ON
VHS/SPCL PB
SPCL PB, VHS
PILOT BLANKING
PB COL KILLER
B C C F DRIVE AMP
R-Y INV
VCA
REC LPF
B-E
REC KILLER
CHROMA VCA
BURST DET
SUB CONV
321FH VCO
4 PHASE GEN
PHASE SHIFT
DET 1
DET 2
PILOT ADDER PB : TH
MAIN CONV
AUTO BAL
REC APC PB DISCRI
100K
APC SW
LP
SP
APC DET
PB AFC FILTER
Q515
C523
C524
SPCL PB
CK DET
2 PHASE FSC
PULSE GEN
FSC GEN
CR DET
ATT
AGC DET
COMP
BURST COL DET
3 Fsc
APC FILTER
R526,C521
ZFH VCO
X'TAL OSC
X501
CF501
Q516
BUFFER
3Fsc
SYNC
C529
VHS/S VHS
TP526
COMP/SEP
NC
C527
TP501
2FH VCO
TP506
VXO
C519
R522
C518
REC APC /PB AFC FILTER
C520
C517
R523
Q510
VHS/SPCL PB : ON
VHS/SPCL PB
IC503-3
Q513
PB : ON
EE/PB
Q514
VHS/SPCL PB : ON
CK DET FILTER
R533
C528
R416
SUB EMPHA IN LEVEL
B101
Q409
BUFFER
LPF 402
LPF 401
TP439
C420
TP421
TP421 UNCOR PULSE
Q401
Q402
Q403
AMP
S VHS NONLINEAR EMPHASIS/DEEMPHASIS
Q408
LP : ON
LP
CLAMP
CLAMP
S VHS
SW3
SW6
SW4
SW2
SW1
VHS
EE
PB
PB ONLY
VIDEO APT
YNR
VHS SP : TH EP : ON S VHS : TH
DETAIL ENHANCER VHS : ON S VHS : TH
ANR VHS : ON S VHS : OFF
SYNC EXP
PICTURE
AGC DET
SYNC SEP
SUB CLAMP
DEEMP & MUTE
BG
SYNC
COL ROT
C438
C440
R445
R446
Q414
RENT : OFF
RENT
S VHS/VHS
FM DET


TP406
PB FM
Q525
BUFFER
EQ501
EQ
LPF501
LPF
Q524
BUFFER
L517,C550
BIAS TRAP
Q521
BUFFER
L516,C545
FM A TRAP
L515,C543
TRAP
Q520
BUFFER
CN501
PB COL
Q522
PAL : ON
PAL
Q519
BUFFER
PB FM CN401-5
AT FM CN502-7
REC COL
From/To 4 3
REC AMP CN2
IC 402
1H DL
Q404
BUFFER
LPF 403
R444
Y NR BALANCE
R416
SUB EMPHA IN LEVEL
B101
Q409
BUFFER
LPF 402
AMP
Q401
Q402
Q403
SW0 5V
R425
L408
C424
Q411
VHS : ON
DEEMP FILTER
C425
C426
C460
Q506
VHS/SPCL PB : ON
VHS/SPCL PB
TP439
C420
TP421
TP421 UNCOR PULSE
TP434
W/D CLIP
LPF 401
S VHS NONLINEAR EMPHASIS/DEEMPHASIS
YNR
VHS
SP : TH
EP : ON
S VHS : TH
CLAMP
S VHS CAR/DEV & W/D CLIP
FREQ MOD
LEVEL ADJ
HPF
Q408
LP : ON
LP
CLAMP
CLAMP
PB ONLY
VIDEO APT
DETAIL ENHANCER
VHS : ON
S VHS : TH
IC 401
MAIN EMP
CAR INT
DOC
SW5
REC
PB
CLAMP
SW14
SW3
SW6
SW4
SW8
SW12
NL/EMP/DE EMP
VHS : ON
S VHS : TH
PB AFC FILTER
Q515
C523
C524
SPCL PB
PICTURE
ANR
VHS : ON
S VHS : OFF
SYNC EXP
AGC DET
SW2
SYNC SEP
SUB LPF
SW13
FREQ DEMOD
DOUBLE LIMITER
DOC DET
TP450
REC FM
CN504
REC FM
PB FM
From/To 4 3
REC AMP CN3
APC FILTER
R526,C521
BG
SUB CLAMP
DEEMP & MUTE
SW1
TH : THROUGH
FM DET (S VHS/VHS)
LOGIC
EDIT
REC/PB 1H DL : M
NC
SYNC
COL ROT
C438
IC 406
D407
SP
R419
YNR PULSE
VAPT OFF
SW0 5V
R422
D404
R423
C440
R445
R446
Q414
RENT : OFF
RENT
S VHS/VHS
FM DET
L410 R428
D405 L411 R429
D406
C429
C430
DEEMP FILTER
R431
SW0 5V
VHS : ON
Q413
IC 407
PAL
PAL : ON
Q412

3.9 SW REG, REGULATOR (1), (2) AND PRIMARY SCHEMATIC DIAGRAMS

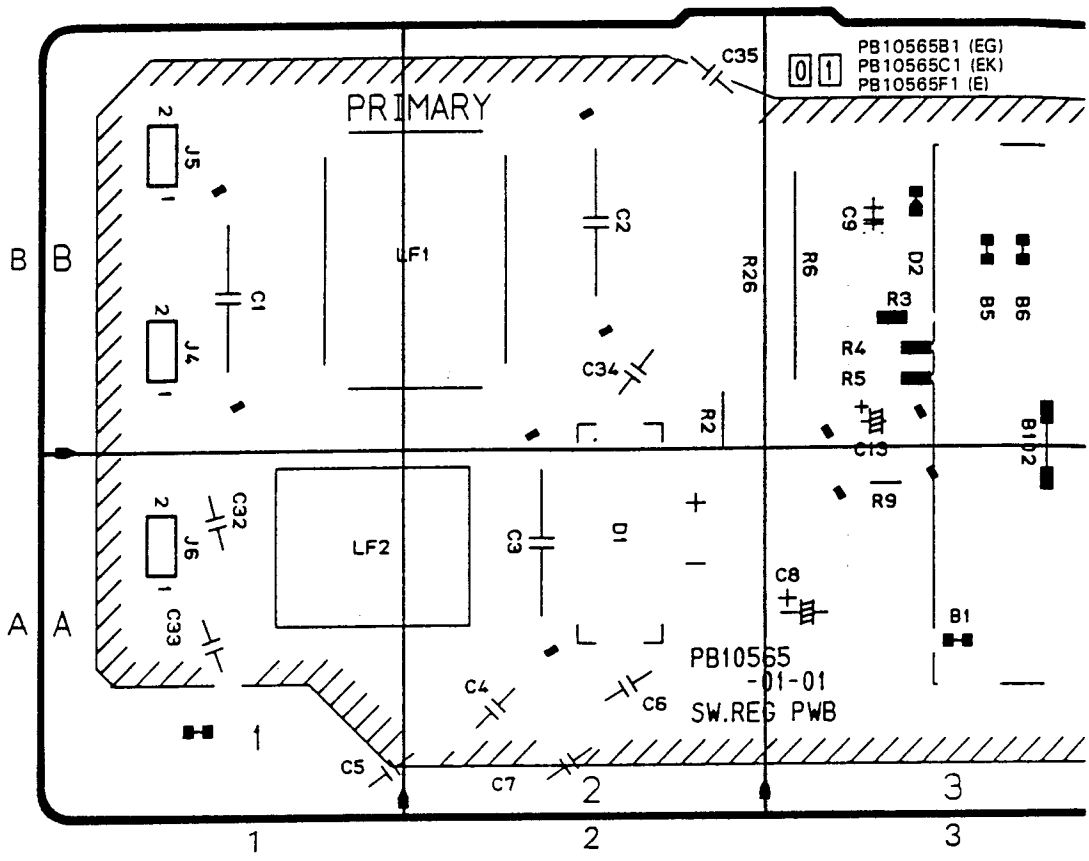



AC OUTLET
CN1
DC4. 1V
DC4. 1V
-30V
GND
SWD 5V
18 REGULATOR(2)
02 REGULATOR(1)
IC1
IC2
AC ONLINE
SWD 5V
7V
GND
MOTOR 13V
MOTOR 17V
46V
12V

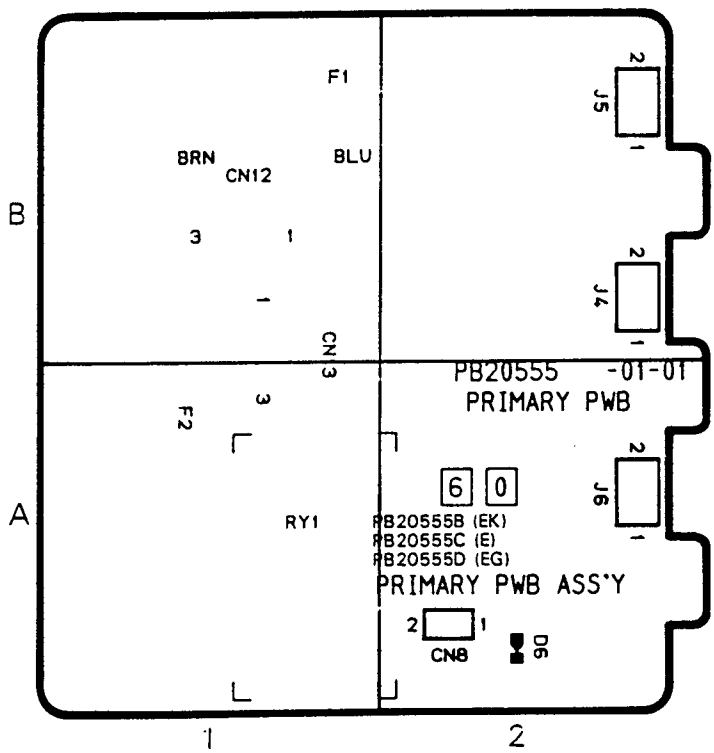

18 REGULATOR(2)
02 REGULATOR(1)
IC2
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN10
J1
J2
J3
AC OUTLET
TP1 SW 5V
TP2 SWD 12V
TP GND
MOTOR 12V
GND(H)
17V
GND
SWD 5V
POWER ON/OFF
UNSW 5.8V
UNSW 12V
45V
To 04 MECHACON (1/3/M1) CN605 (Page 3-21)
To 09 AUDIO UNIT CN4 (Page 3-31)
To 08 TUNER CTL CN101 (Page 3-59 E/EG) (Page 3-61 EK)
To 43 REC AMP CN6 (Page 3-54)
To 10 VIDEO INTERFACE CN1 (Page 3-43)
From/To 10 VIDEO (TERMINAL) CN801 (Page 3-47)
From/To 28 SW/DISPLAY CN101 (Page 3-71)

3.10 SW REG, REGULATOR (1),(2) AND PRIMARY CIRCUIT BOARDS

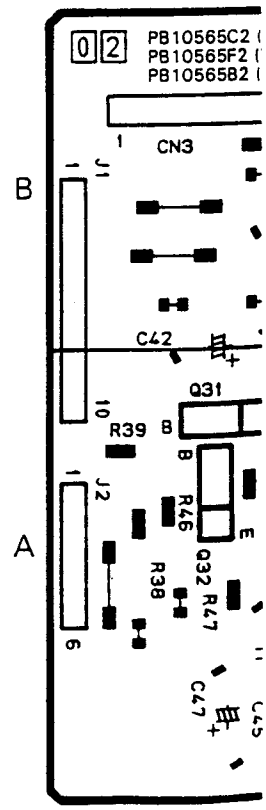
—SW REG—



—PRIMARY—

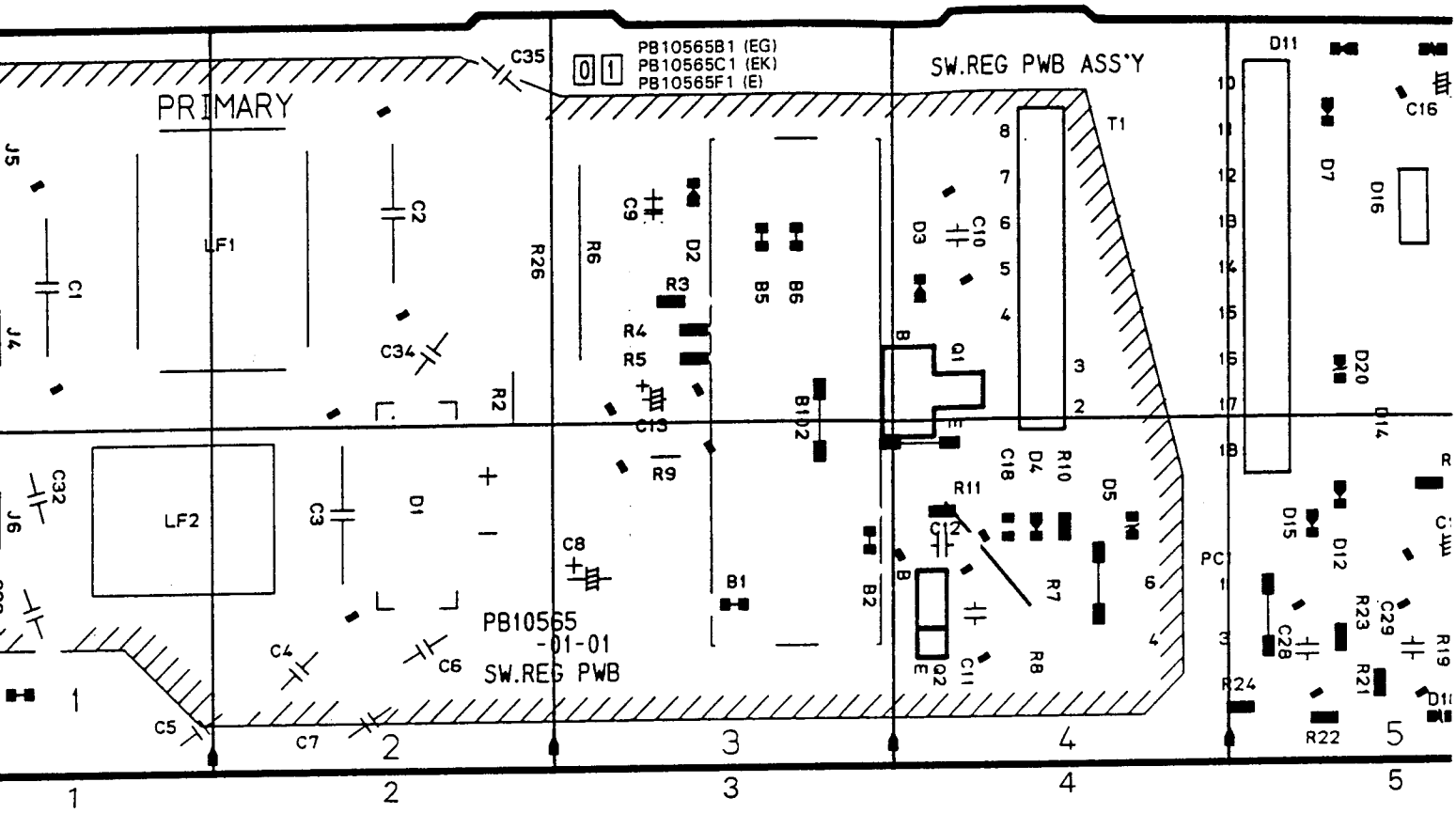


—REGULAT

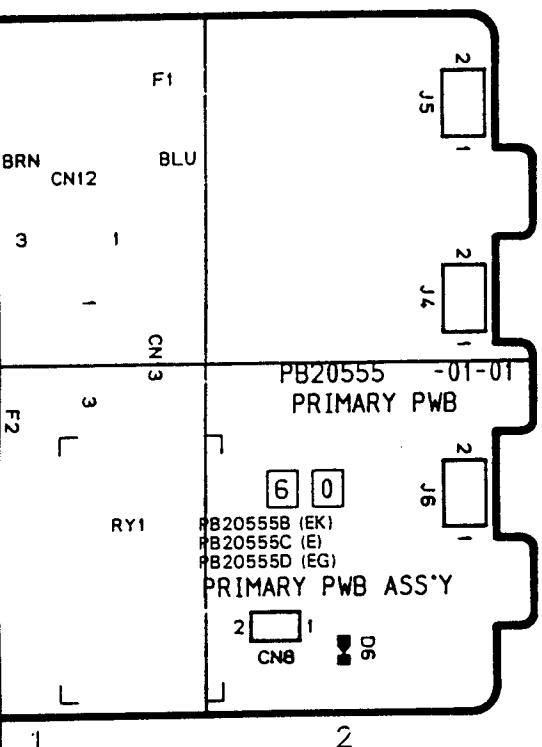


R (1),(2) AND PRIMARY CIRCUIT BOARDS

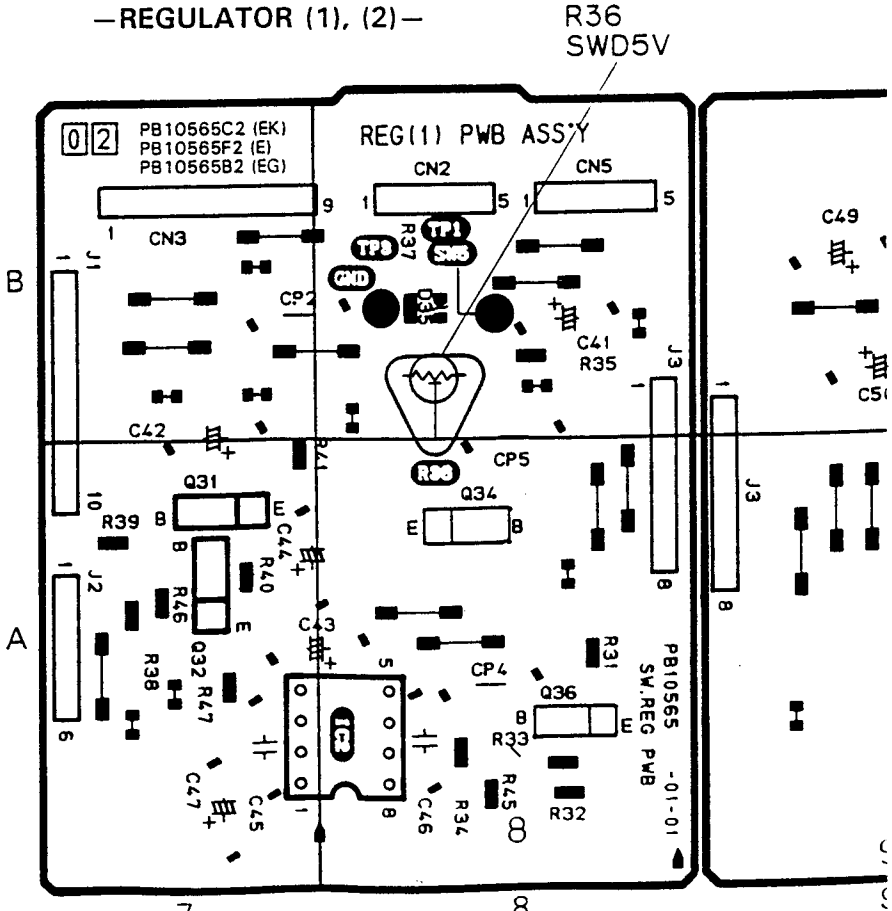
—SW REG—

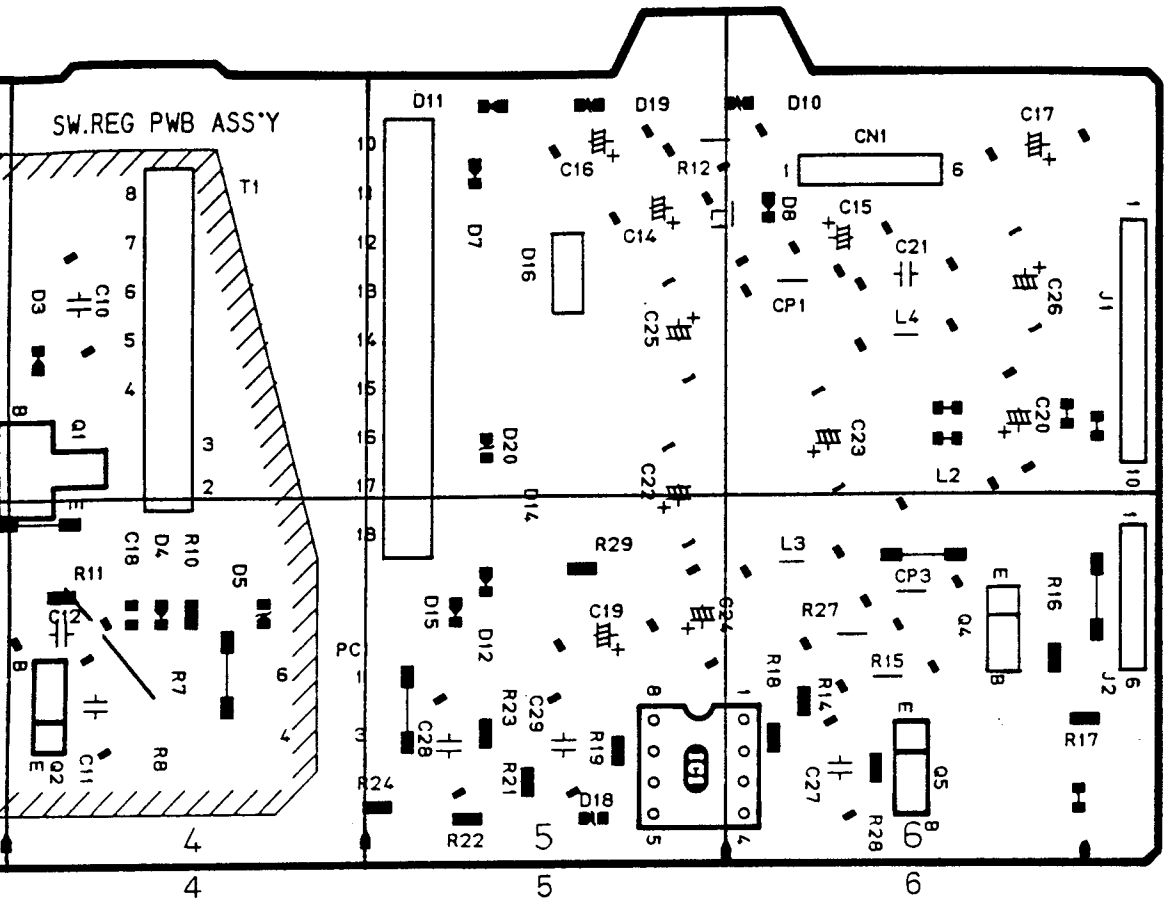


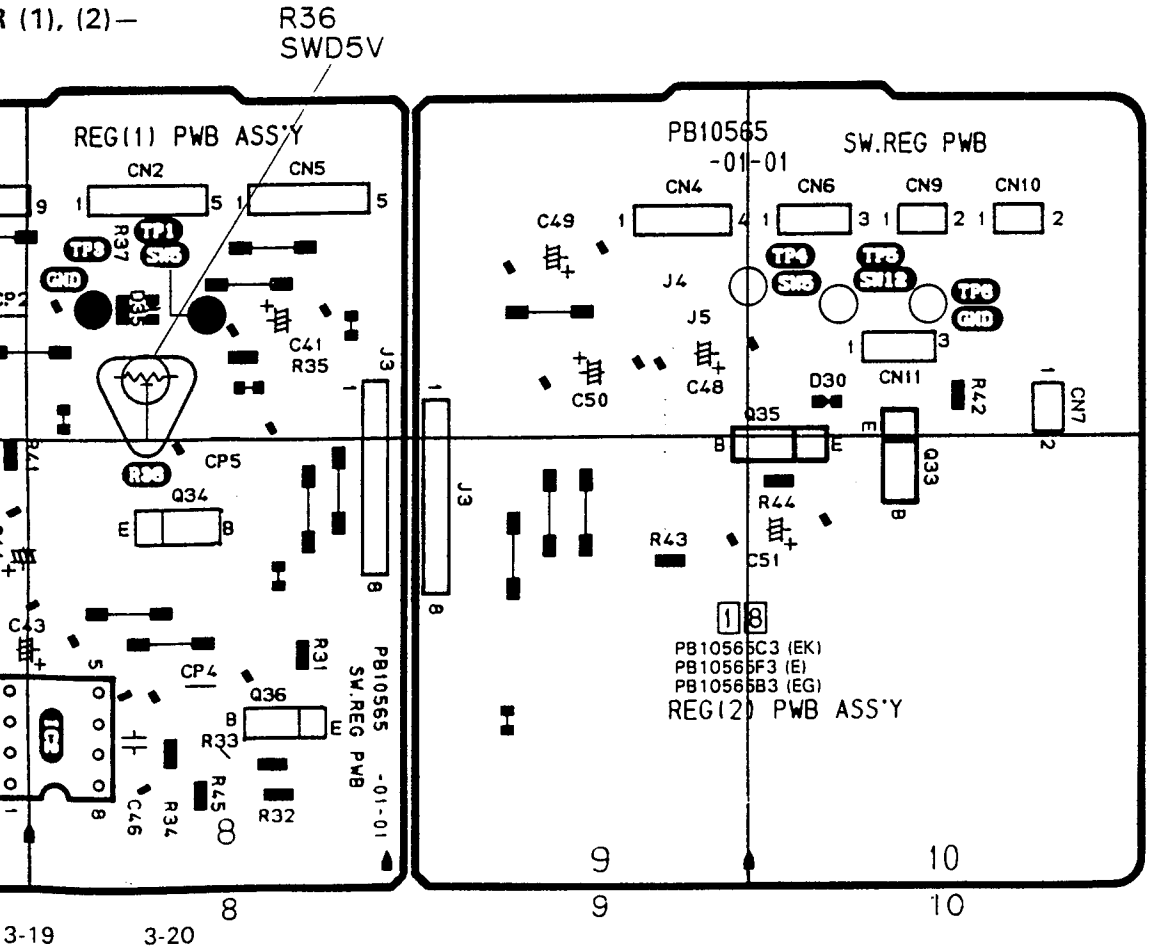
—PRIMARY—



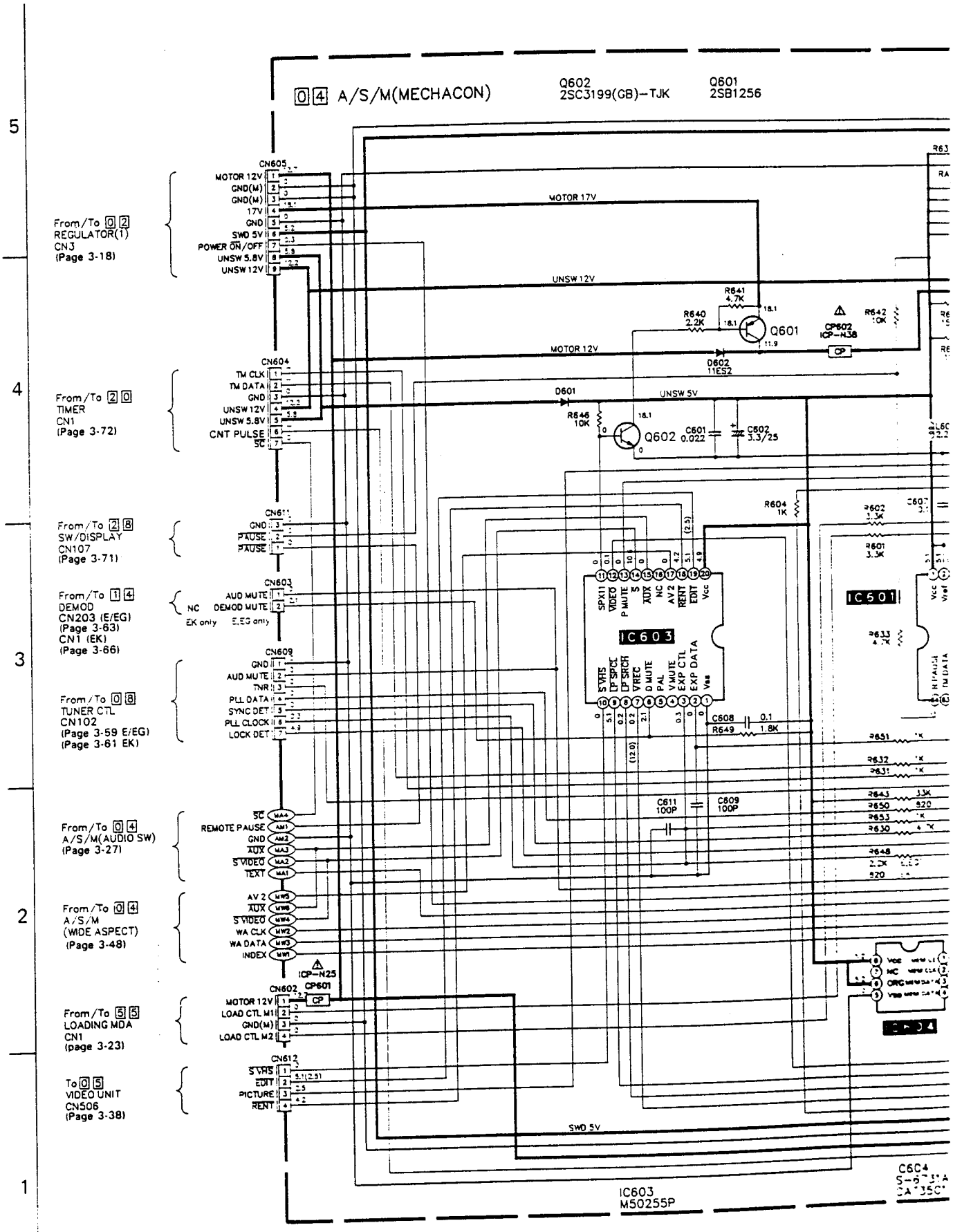
—REGULATOR (1), (2)—

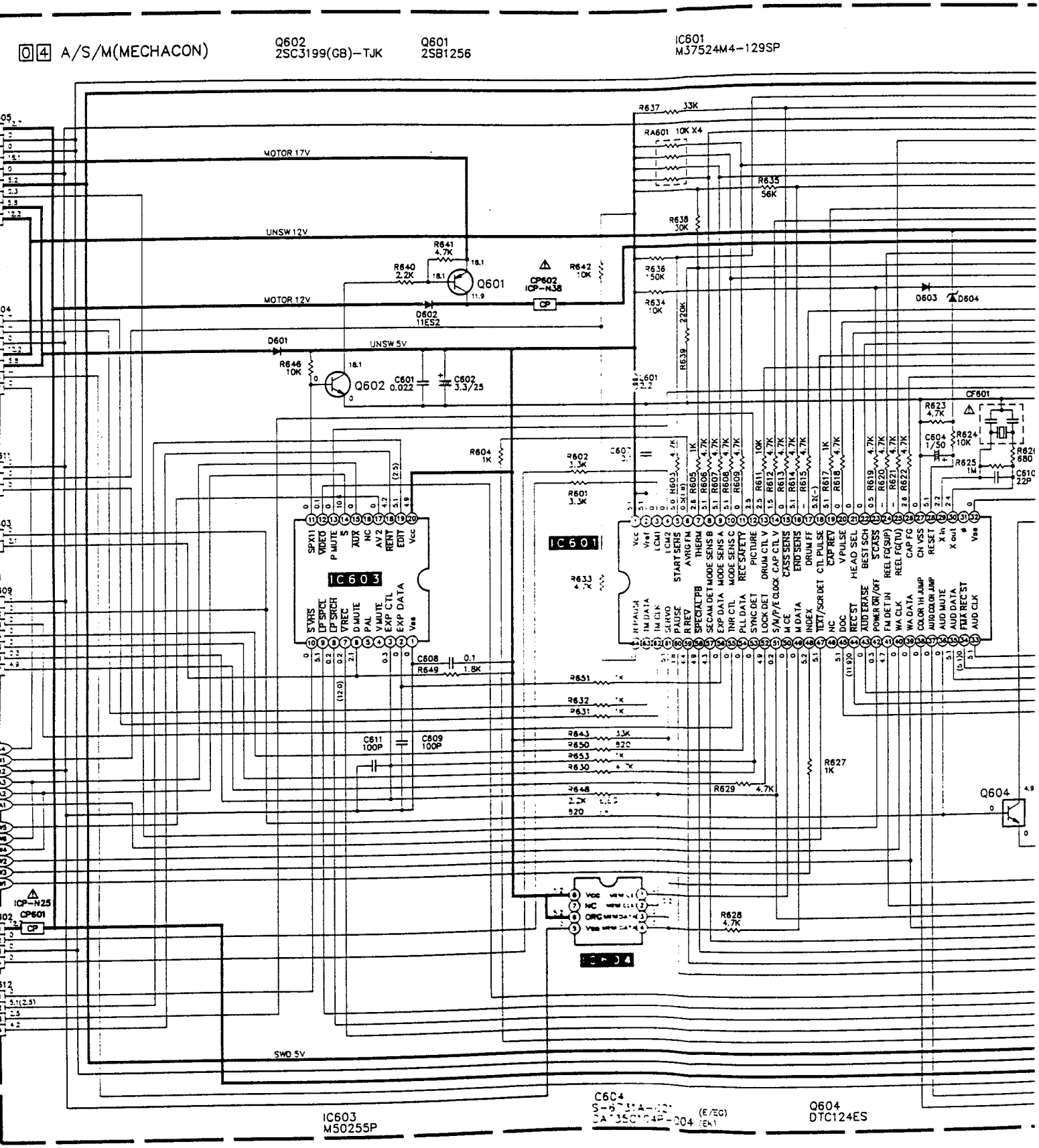


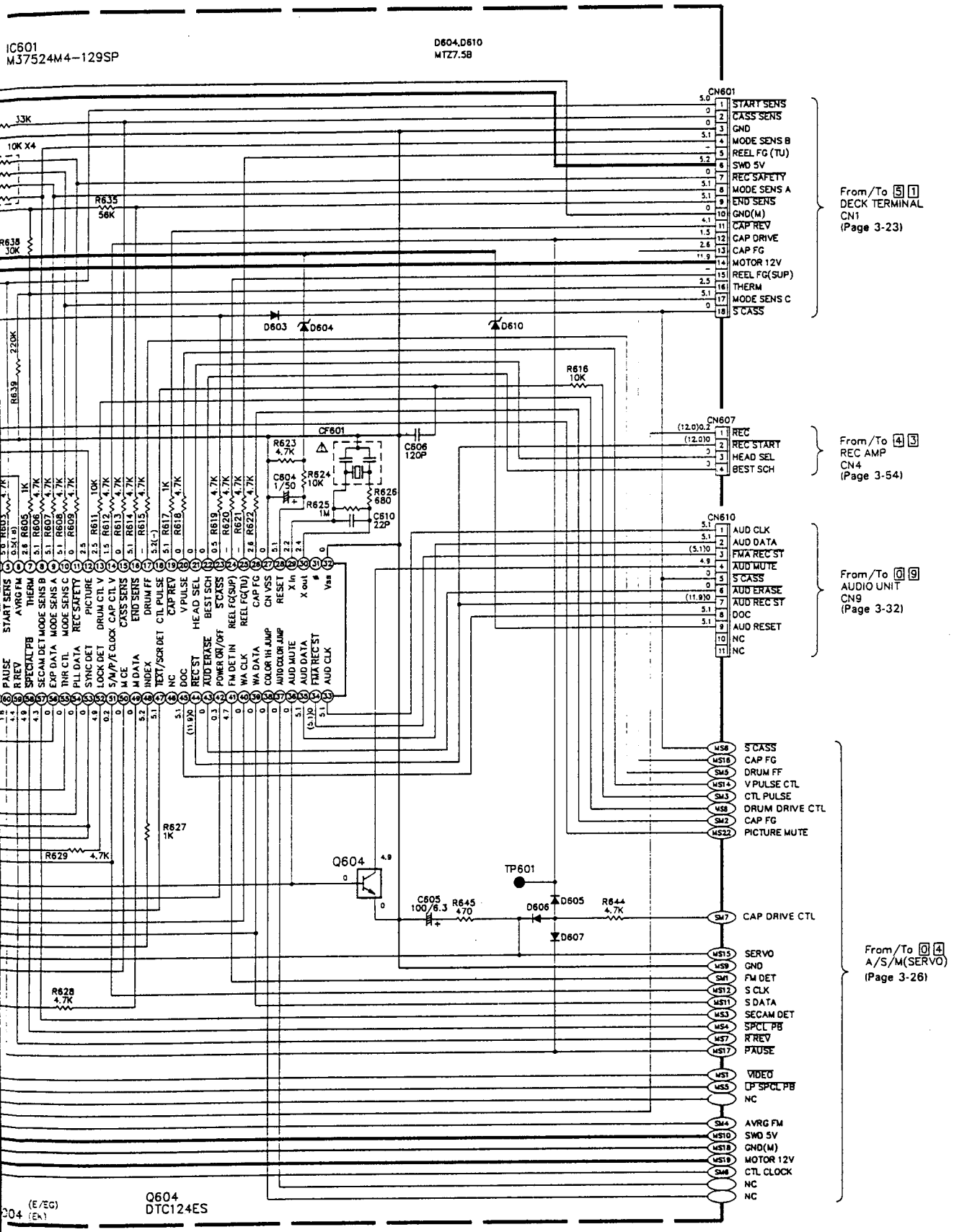

SW.REG PWB ASS'Y
D11
D19
D10
CN1
C17
C16
R12
C15
C14
C21
C26
J1
CP1
L4
C25
C23
C20
L2
D20
C22
D14
R29
L3
CP3
C19
R27
Q4
R16
J2
R15
R18
R14
C27
Q5
R17
R28
R22
R24
D18
C29
R23
R21
C28
D15
D12
R11
C12
R7
R8
C11
Q2
C18
D4
R10
D5
T1
Q1
D3
C10
4
5
6


R36
SWD5V
REG(1) PWB ASS'Y
CN2
CN5
TP1
SW5
TP3
GND
R37
C41
R35
J3
CP5
Q34
R38
C43
R31
CP4
Q36
R33
R45
R32
C46
R34
PB10565 -01-01 SW.REG PWB
PB10565
-01-01
SW.REG PWB
CN4
CN6
CN9
CN10
C49
J4
J5
TP4
SW9
TP5
SW12
TP6
GND
CN11
D30
C48
C50
Q35
R42
CN7
Q33
R44
R43
C51
J3
PB10565C3 (EK)
PB10565F3 (E)
PB10565B3 (EG)
REG(2) PWB ASS'Y
8
9
10

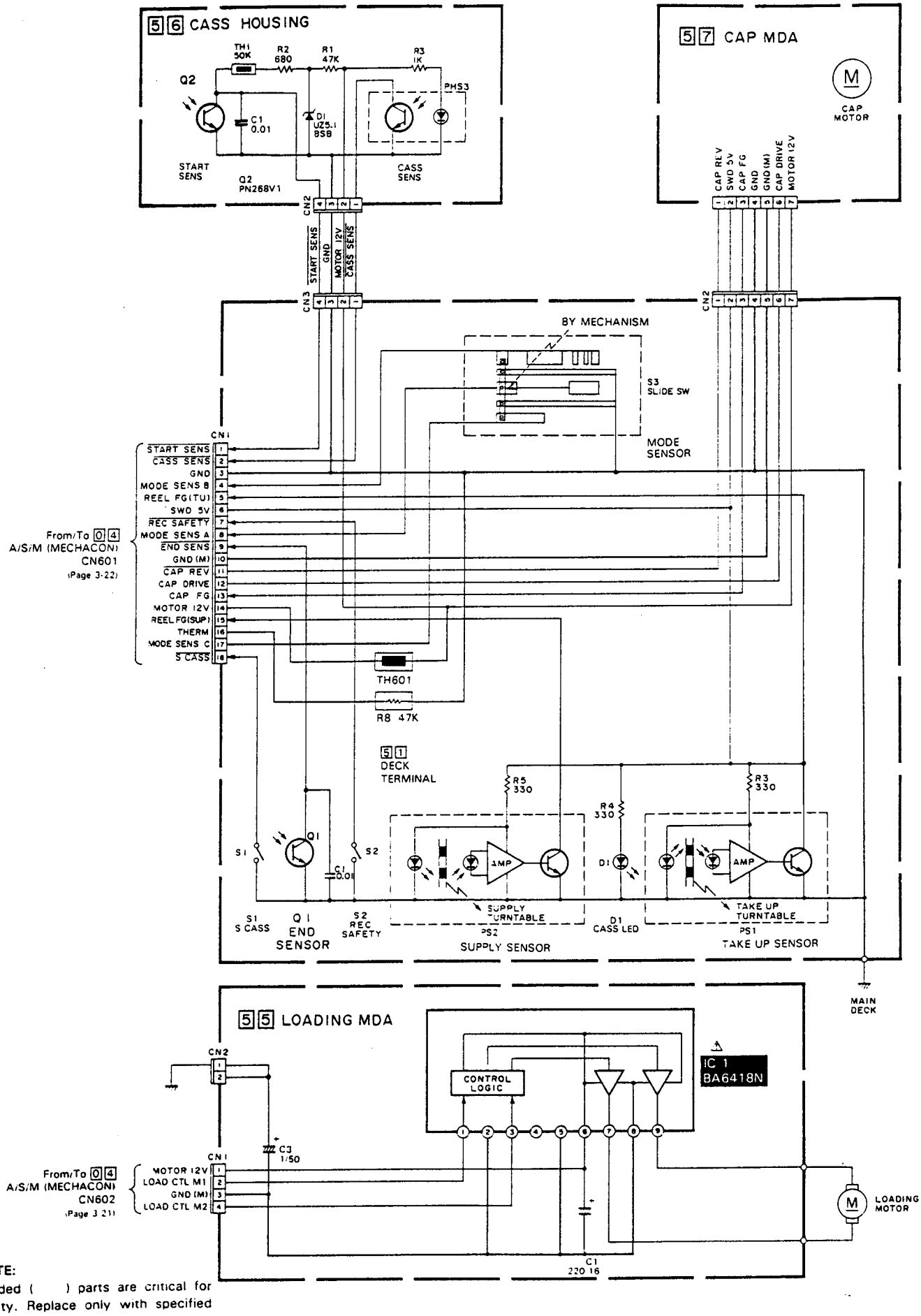
3.11 MECHACON SCHEMATIC DIAGRAM




04 A/S/M(MECHACON)
Q602
2SC3199(GB)-TJK
Q601
2SB1256
IC601
M37524M4-129SP
MOTOR 17V
UNSW 12V
MOTOR 12V
UNSW 5V
SW0 5V
Q601
Q602
D601
D602
11ES2
D603
D604
IC603
IC601
IC604
Q604
CF601
CP602
CP601
R637 33K
RA601 10K X4
R635 56K
R638 30K
R636 50K
R634 10K
R639 220K
R641 4.7K
R640 2.2K
R642 10K
R646 10K
C601 0.022
C602 3.3/25
C608 0.1
R649 1.8K
C611 100P
C609 100P
R627 1K
R629 4.7K
R628 4.7K
IC603
M50255P
Q604
DTC124ES

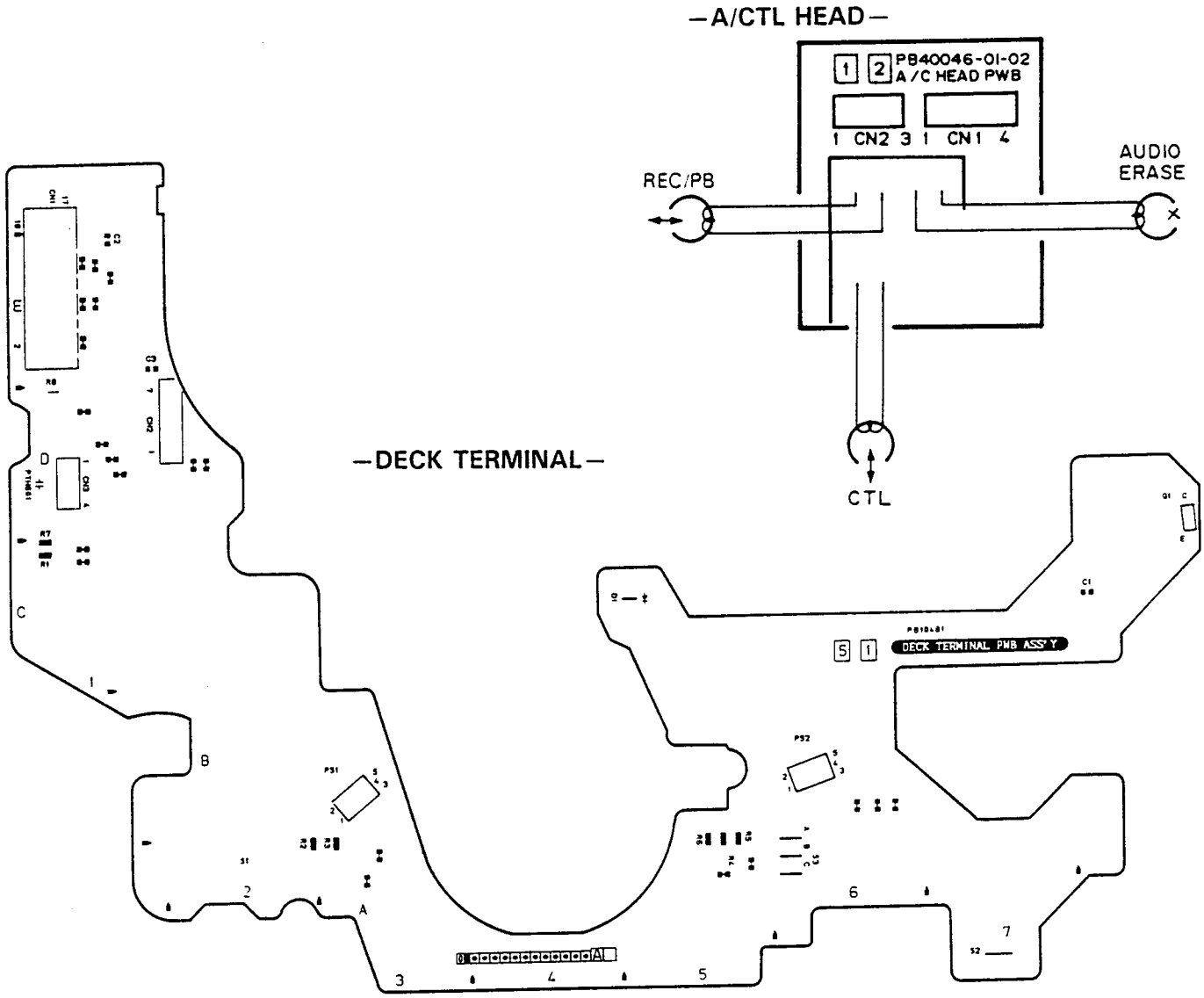

IC601
M37524M4-129SP
D604,D610
MTZ7.5B
CN601
START SENS
CASS SENS
GND
MODE SENS B
REEL FG (TU)
SW0 5V
REC SAFETY
MODE SENS A
END SENS
GND(M)
CAP REV
CAP DRIVE
CAP FG
MOTOR 12V
REEL FG(SUP)
THERM
MODE SENS C
S CASS
From/To 5 1
DECK TERMINAL
CN1
(Page 3-23)
CN607
REC
REC START
HEAD SEL
BEST SCH
From/To 4 3
REC AMP
CN4
(Page 3-54)
CN610
AUD CLK
AUD DATA
FMA REC ST
AUD MUTE
S CASS
AUD ERASE
AUD REC ST
DOC
AUD RESET
NC
NC
From/To 0 9
AUDIO UNIT
CN9
(Page 3-32)
S CASS
CAP FG
DRUM FF
V PULSE CTL
CTL PULSE
DRUM DRIVE CTL
CAP FG
PICTURE MUTE
CAP DRIVE CTL
SERVO
GND
FM DET
S CLK
S DATA
SECAM DET
SPCL PB
R REV
PAUSE
VIDEO
LP SPCL PB
NC
AVRG FM
SW0 5V
GND(M)
MOTOR 12V
CTL CLOCK
NC
NC
From/To 0 4
A/S/M(SERVO)
(Page 3-26)
Q604
DTC124ES
D603
D604
D610
CF601
TP601
D605
D606
D607
R616 10K
R627 1K
R628 4.7K
R629 4.7K
R635 56K
R638 30K
R639 220K

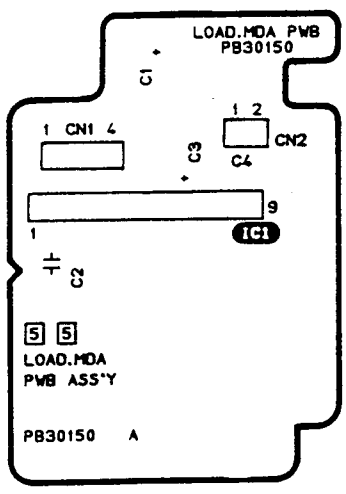
3.12 DECK TERMINAL, LOADING MDA, CAPSTAN MDA & C. HOUSING SCHEMATIC DIAGRAMS

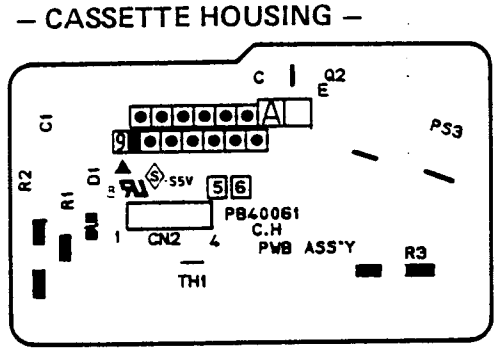


NOTE:
Shaded ( ) parts are critical for safety. Replace only with specified part numbers.

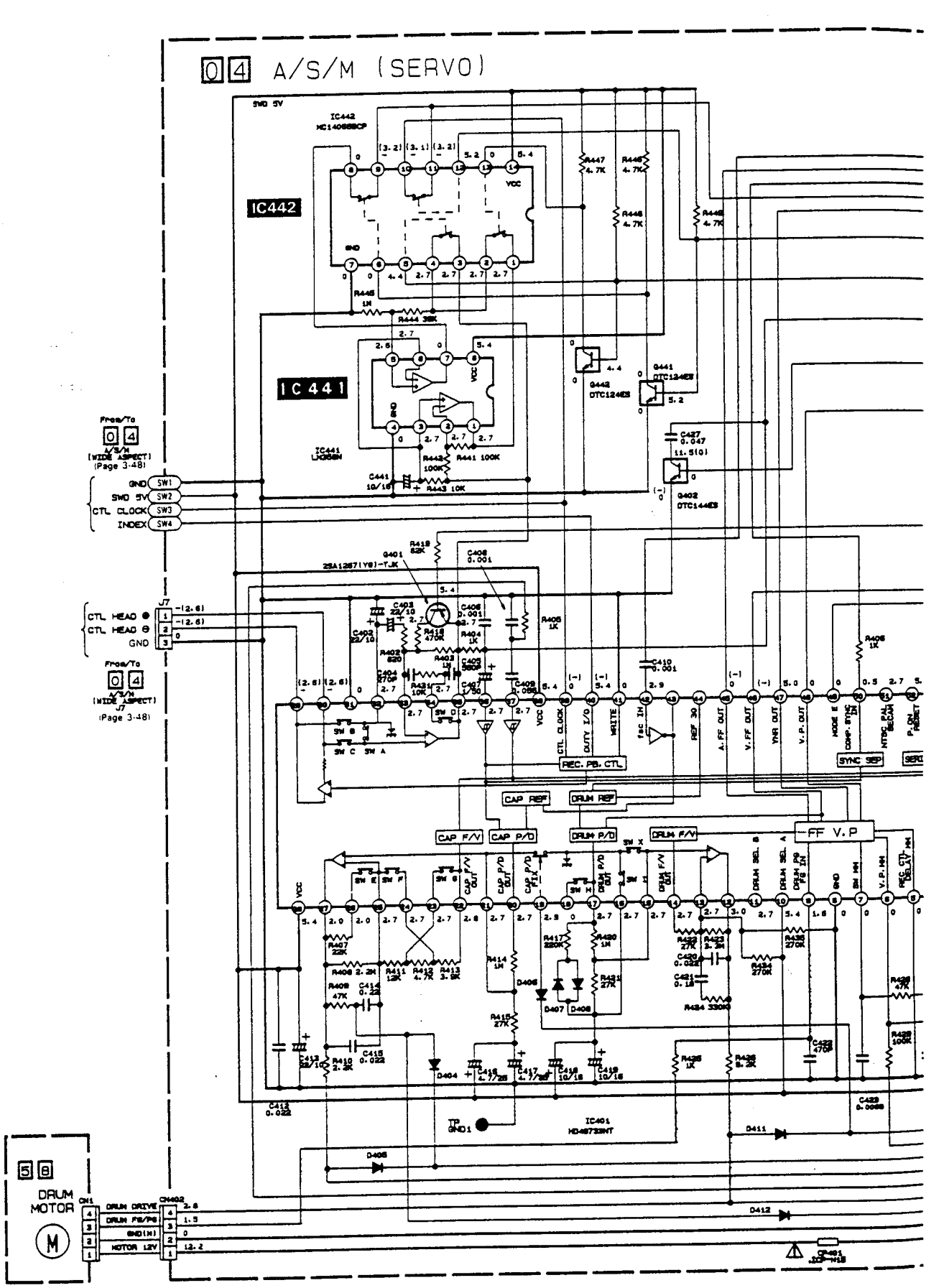
3.13 DECK TERMINAL, LOADING MDA, A/CTL HEAD & C. HOUSING CIRCUIT BOARDS



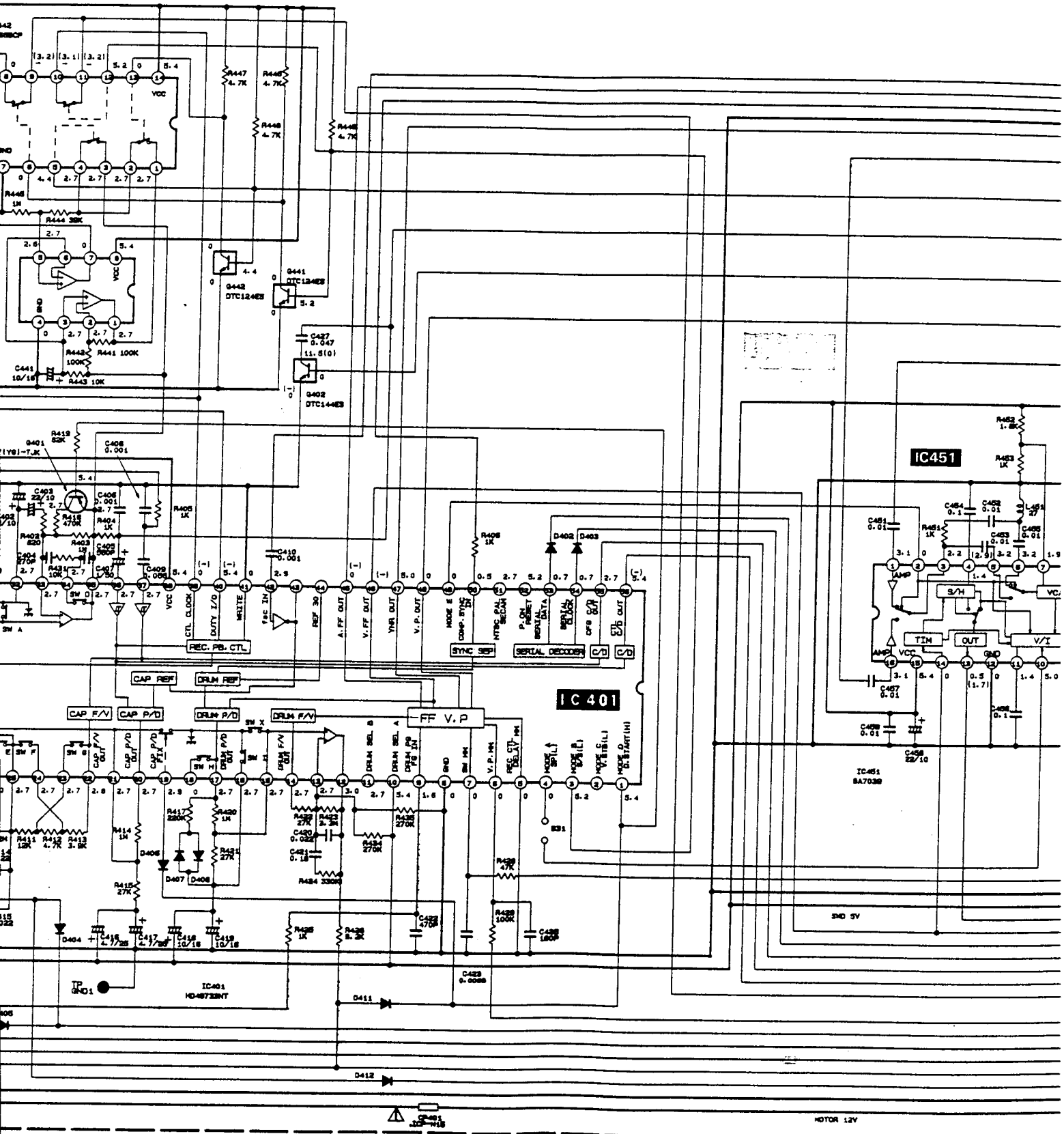


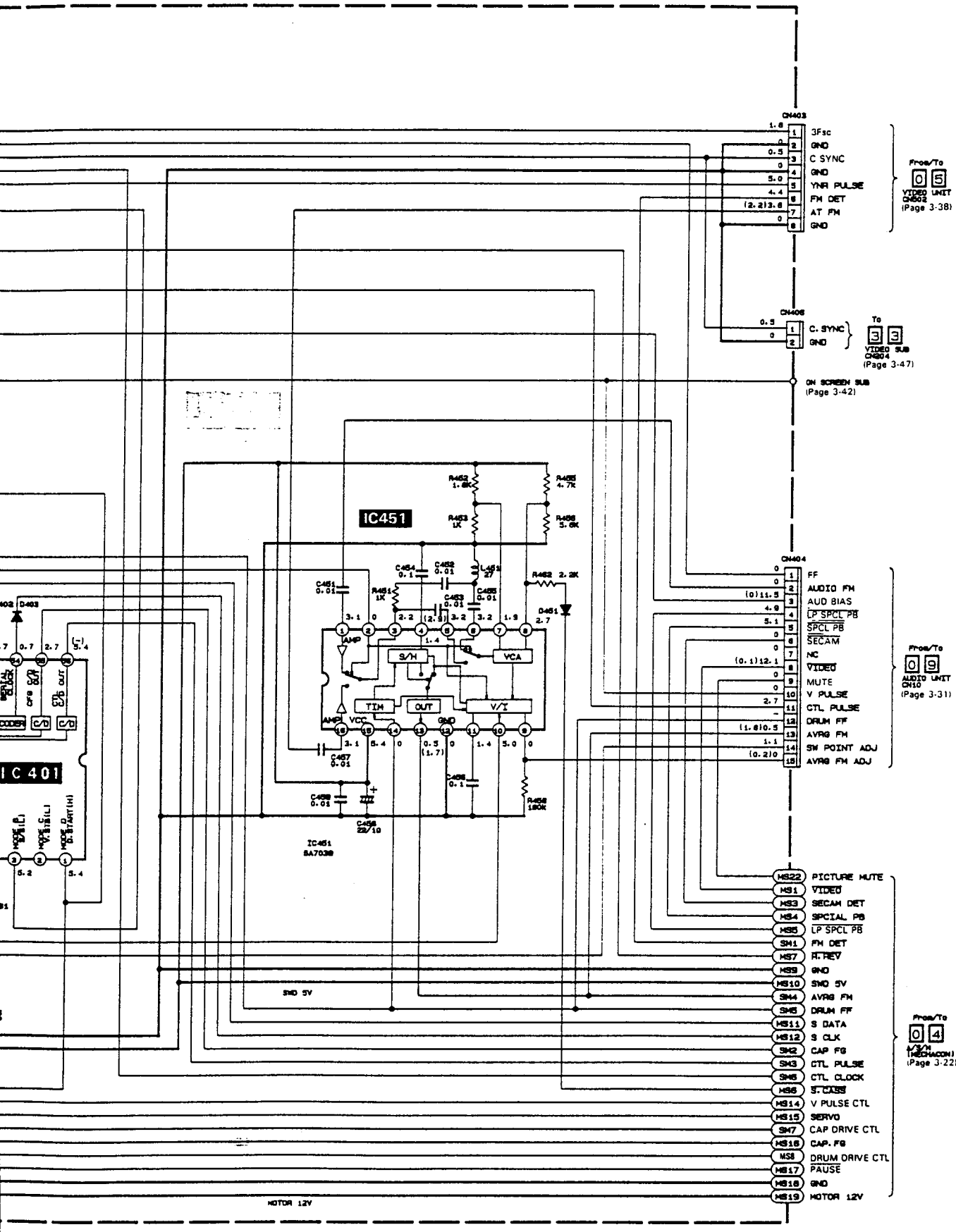


3.14 SERVO SCHEMATIC DIAGRAM

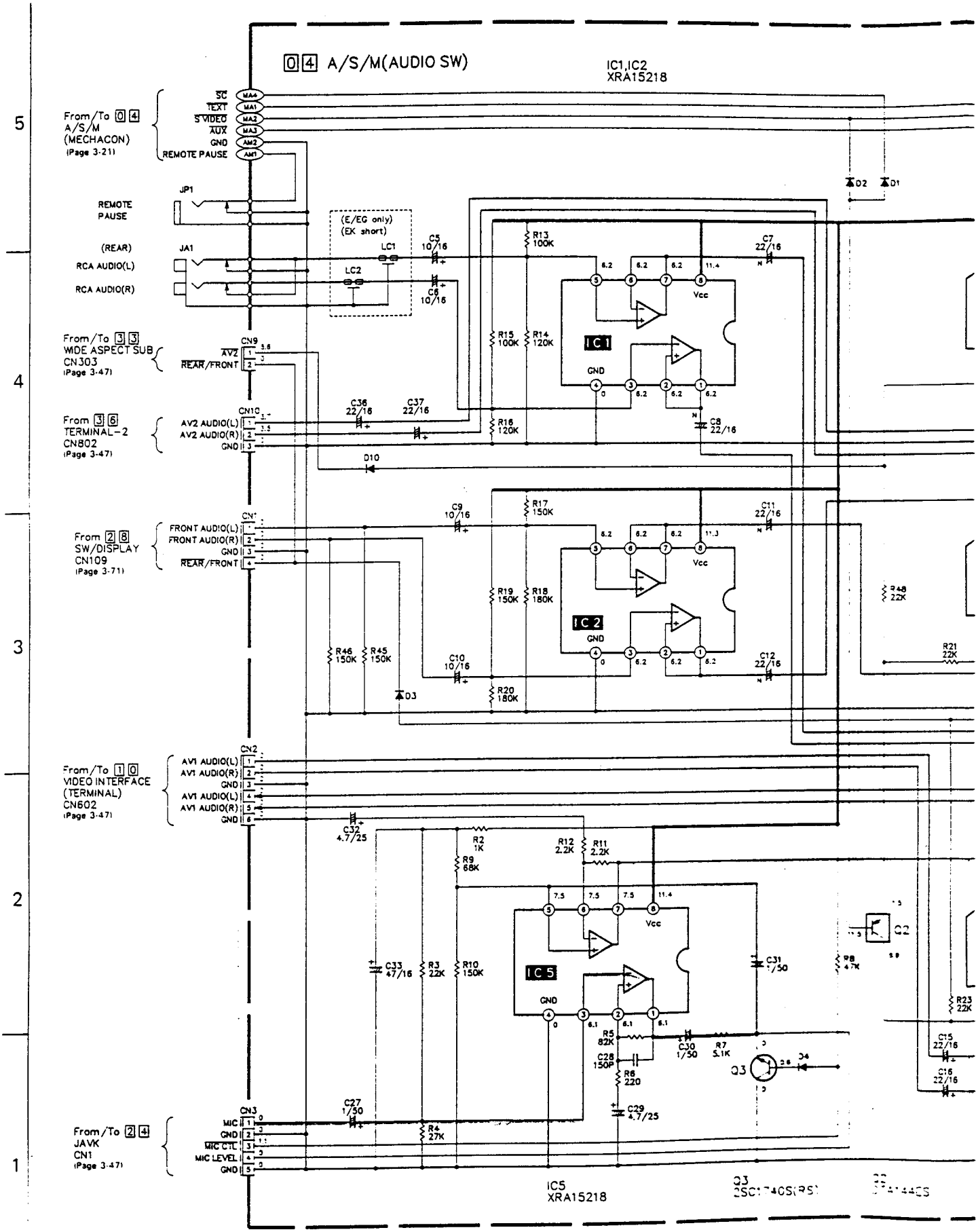


M (SERVO)


IC451
IC 401
REC. PB. CTL
SYNC SEP
SERIAL DECODER
CAP REF
DRUM REF
CAP F/V
CAP P/D
DRUM P/D
DRUM F/V
FF V.P
IC401
IC451
SA7038
VCC
GND
MOTOR 12V


CN403
3Fsc
GND
C SYNC
GND
YNR PULSE
FM DET
AT FM
GND
From/To
VIDEO UNIT CN502
(Page 3-38)
CN406
C. SYNC
GND
To
VIDEO SUB CN804
(Page 3-47)
ON SCREEN SUB
(Page 3-42)
IC451
IC451
SA7038
AMP
S/H
VCA
TIM
OUT
V/I
VCC
GND
CN404
FF
AUDIO FM
AUD BIAS
LP SPCL PB
SPCL PB
SECAM
NC
VIDEO
MUTE
V PULSE
CTL PULSE
DRUM FF
AVRG FM
SW POINT ADJ
AVRG FM ADJ
From/To
AUDIO UNIT CN10
(Page 3-31)
MS22 PICTURE MUTE
MS1 VIDEO
MS3 SECAM DET
MS4 SPCIAL PB
MS5 LP SPCL PB
SM1 FM DET
MS7 R.REV
MS9 GND
MS10 SMD 5V
SM4 AVRG FM
SM5 DRUM FF
MS11 S DATA
MS12 S CLK
SM2 CAP FG
SM3 CTL PULSE
SM6 CTL CLOCK
MS6 S.CASS
MS14 V PULSE CTL
MS15 SERVO
SM7 CAP DRIVE CTL
MS16 CAP. FG
MS8 DRUM DRIVE CTL
MS17 PAUSE
MS18 GND
MS19 MOTOR 12V
From/To
M/S/H (MECHACON)
(Page 3-22)
SMD 5V
MOTOR 12V

3.15 AUDIO SW SCHEMATIC DIAGRAM



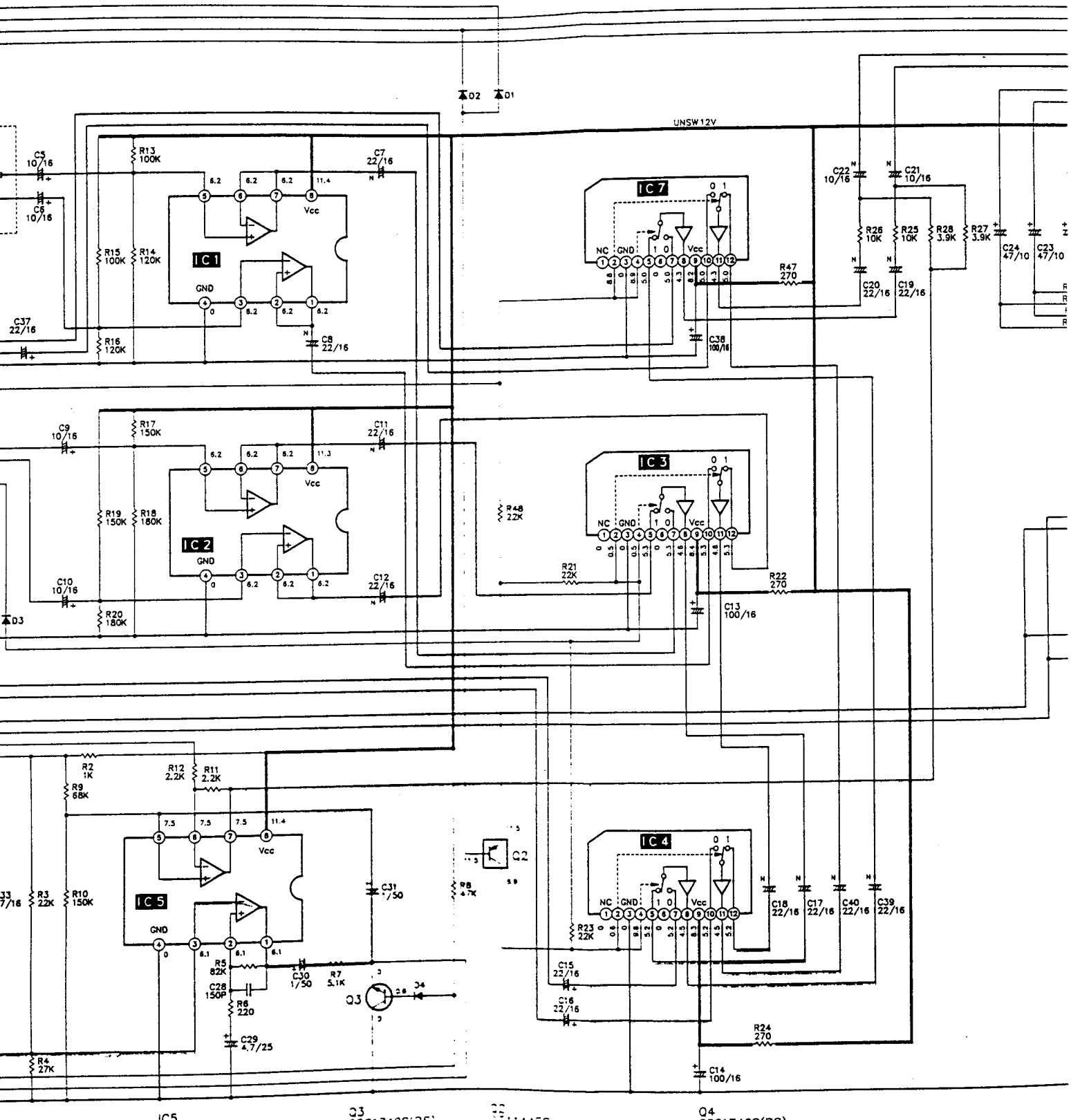
AM

AUDIO SW)

IC1,IC2
XRA15218

IC3,IC4,IC7
LA7222

Q1
2SC3311A(RS

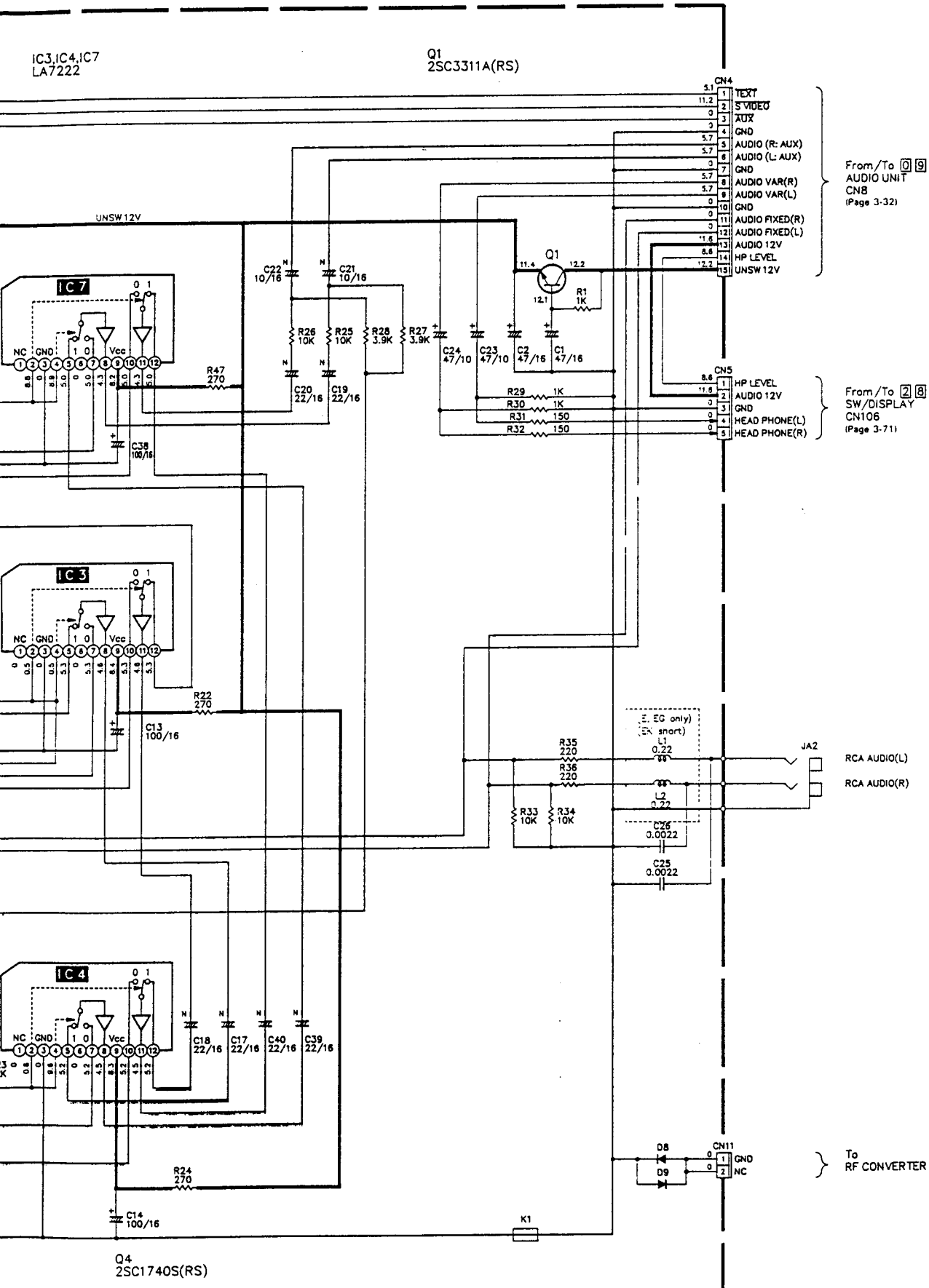


IC5
XRA15218

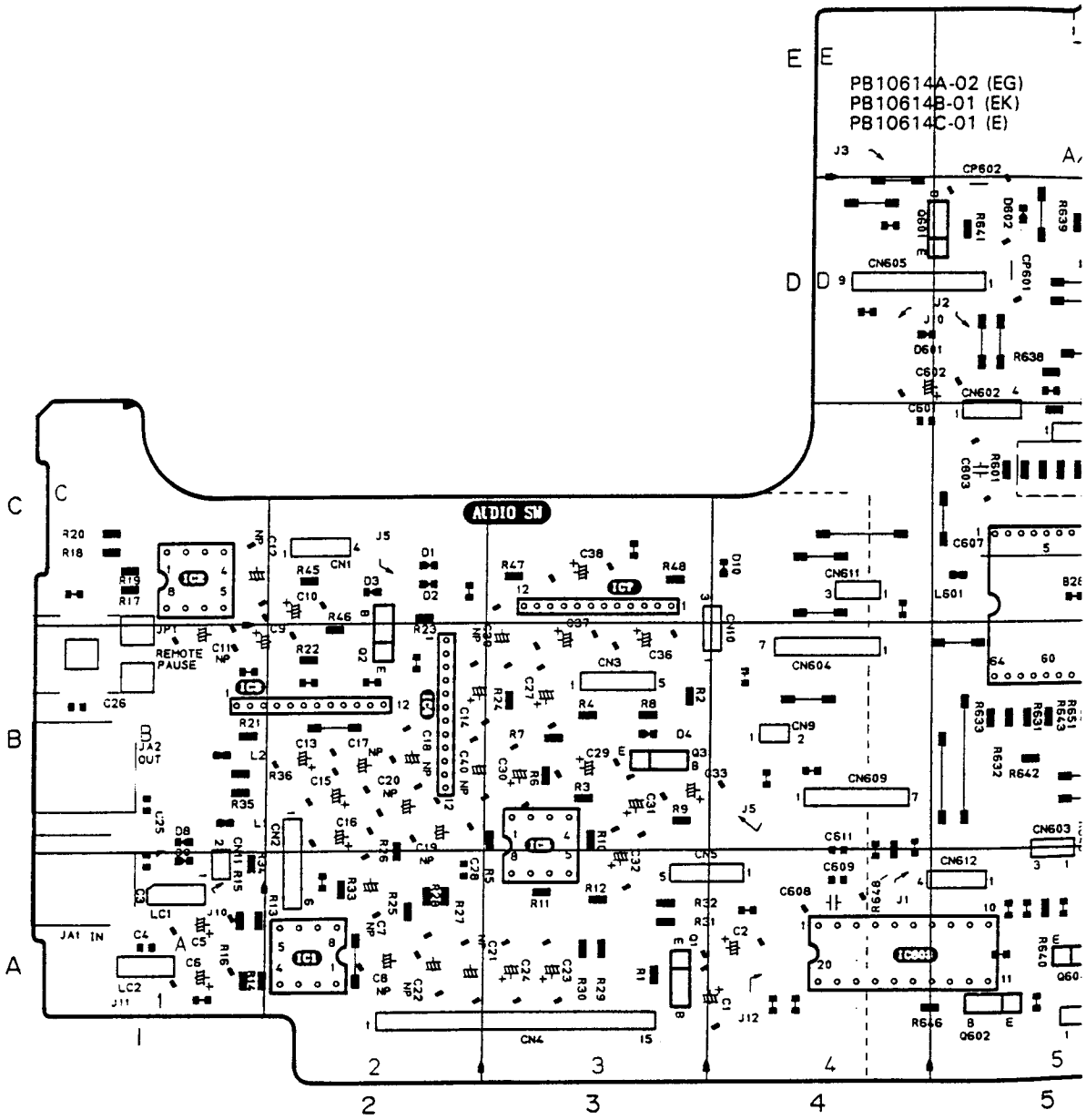
Q3
2SC1740S(RS)

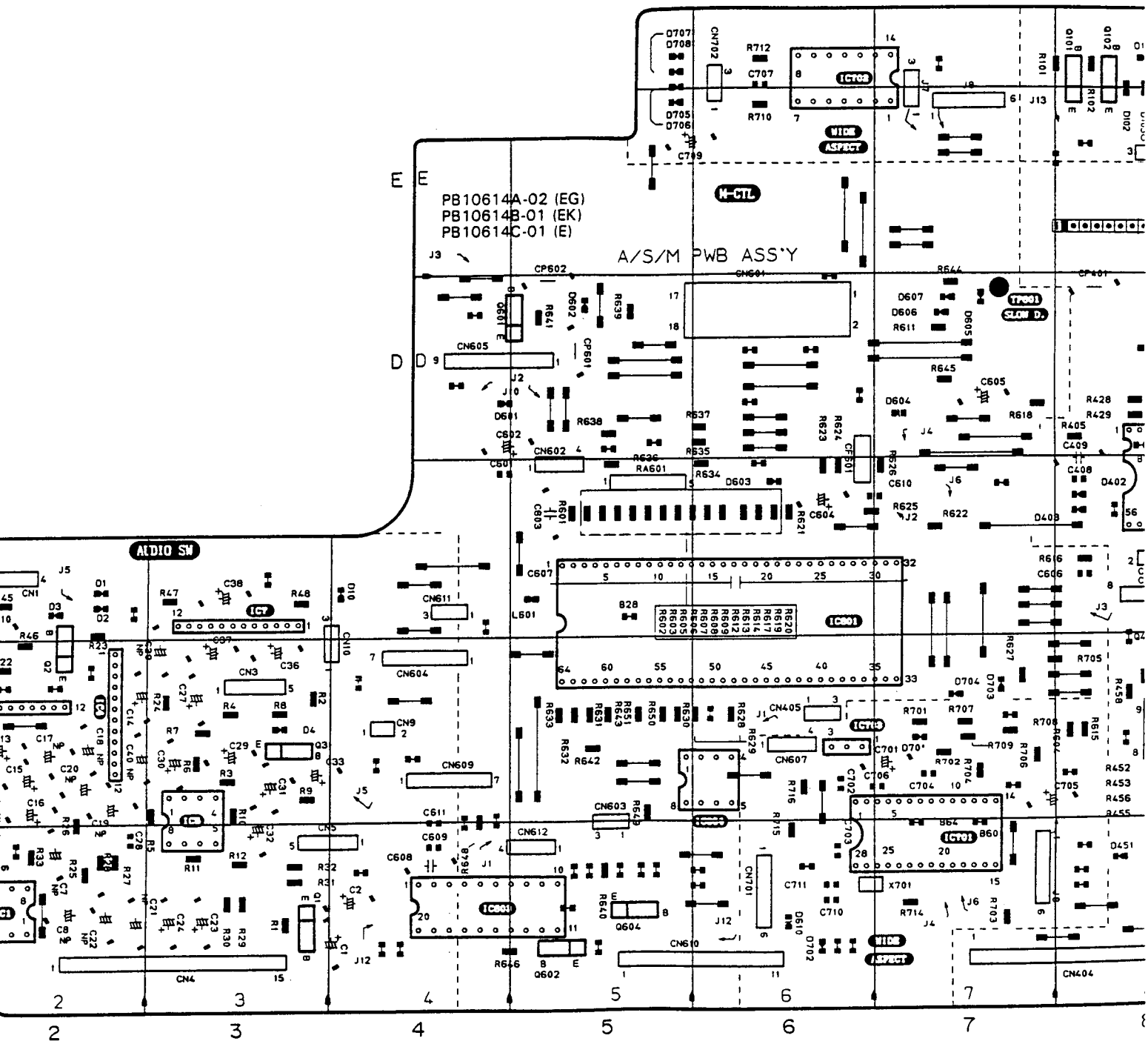
Q4
2SC1740S(RS)

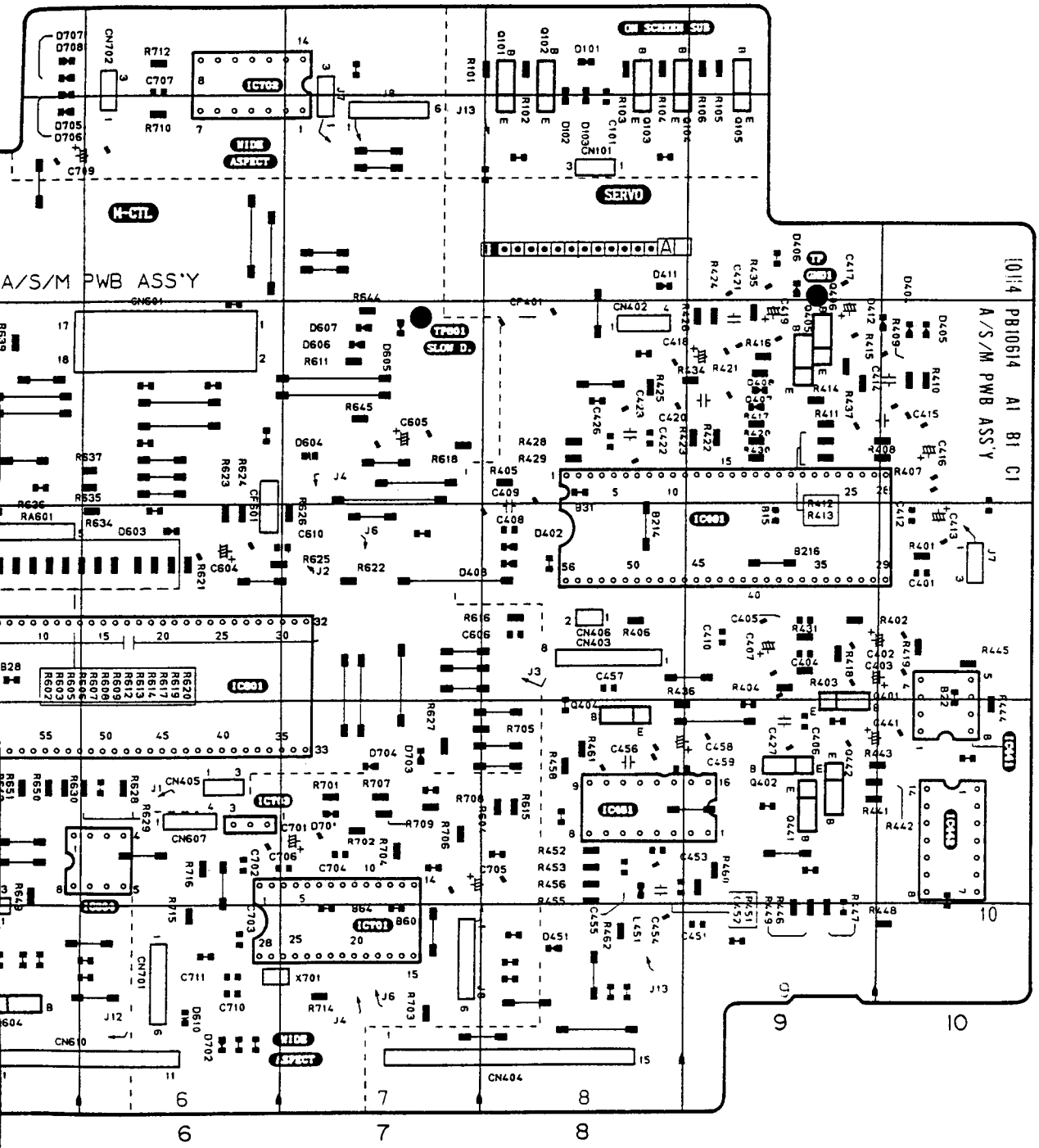
B | C | D | 3-27 | 3-28 | E


IC3,IC4,IC7
LA7222
Q1
2SC3311A(RS)
CN4
TEXT
S VIDEO
AUX
GND
AUDIO (R: AUX)
AUDIO (L: AUX)
GND
AUDIO VAR(R)
AUDIO VAR(L)
GND
AUDIO FIXED(R)
AUDIO FIXED(L)
AUDIO 12V
HP LEVEL
UNSW 12V
From/To 09
AUDIO UNIT
CN8
(Page 3-32)
UNSW12V
IC7
IC3
IC4
NC GND Vcc
R47 270
R22 270
R24 270
C38 100/16
C13 100/16
C14 100/16
C22 10/16
C21 10/16
C20 22/16
C19 22/16
C18 22/16
C17 22/16
C40 22/16
C39 22/16
R26 10K
R25 10K
R28 3.9K
R27 3.9K
C24 47/10
C23 47/10
C2 47/16
C1 47/16
R1 1K
CN5
HP LEVEL
AUDIO 12V
GND
HEAD PHONE(L)
HEAD PHONE(R)
From/To 28
SW/DISPLAY
CN106
(Page 3-71)
R29 1K
R30 1K
R31 150
R32 150
R35 220
R36 220
R33 10K
R34 10K
(E, EG only)
(EK short)
L1 0.22
L2 0.22
C26 0.0022
C25 0.0022
JA2
RCA AUDIO(L)
RCA AUDIO(R)
D8
D9
CN11
GND
NC
To
RF CONVERTER
K1
Q4
2SC1740S(RS)

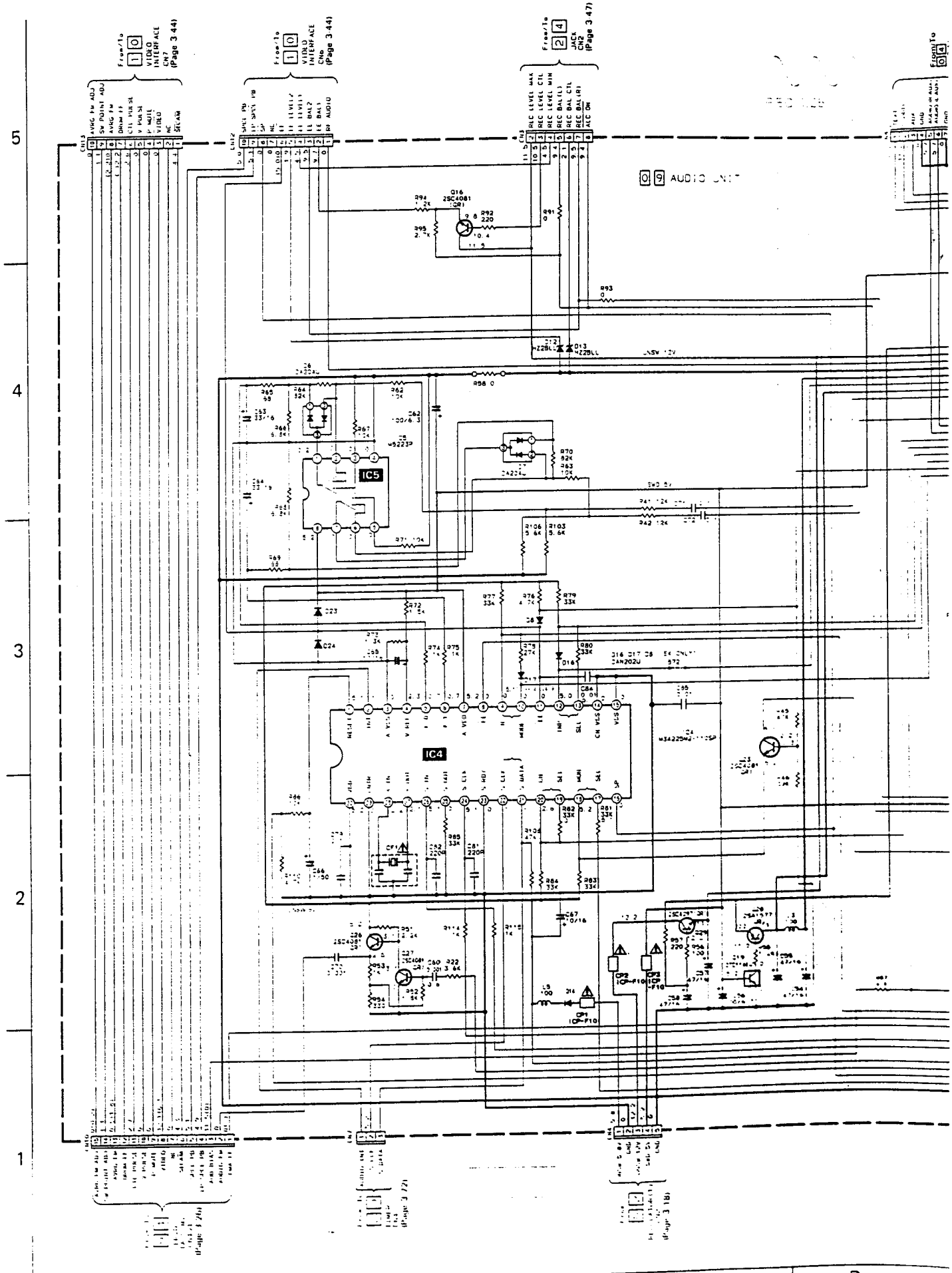
3.16 A/S/M CIRCUIT BOARD



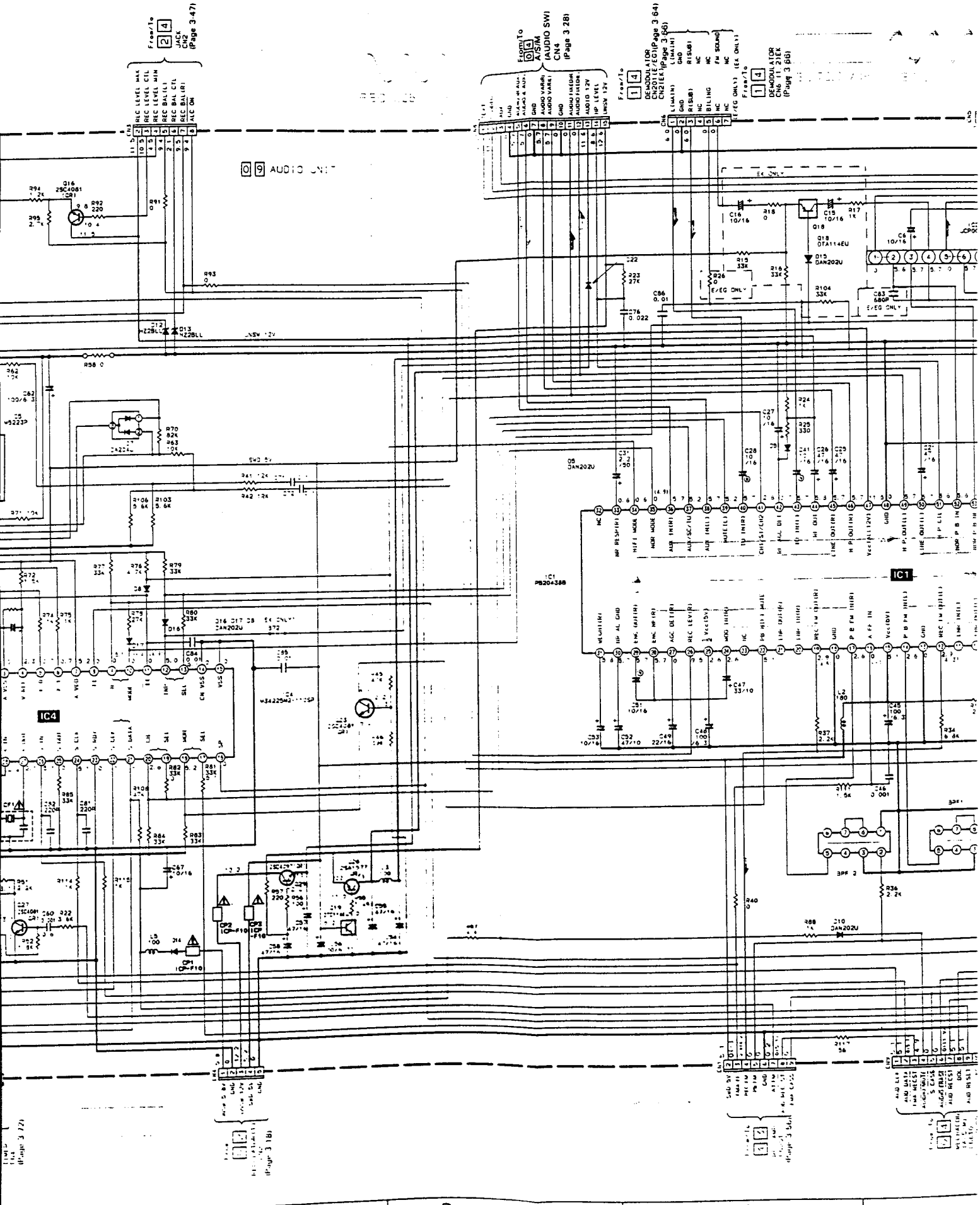

PB10614A-02 (EG)
PB10614B-01 (EK)
PB10614C-01 (E)
A/S/M PWB ASS'Y
AUDIO SW
H-CTL
V-DIR
ASPECT
E
D
2
3
4
5
6
7

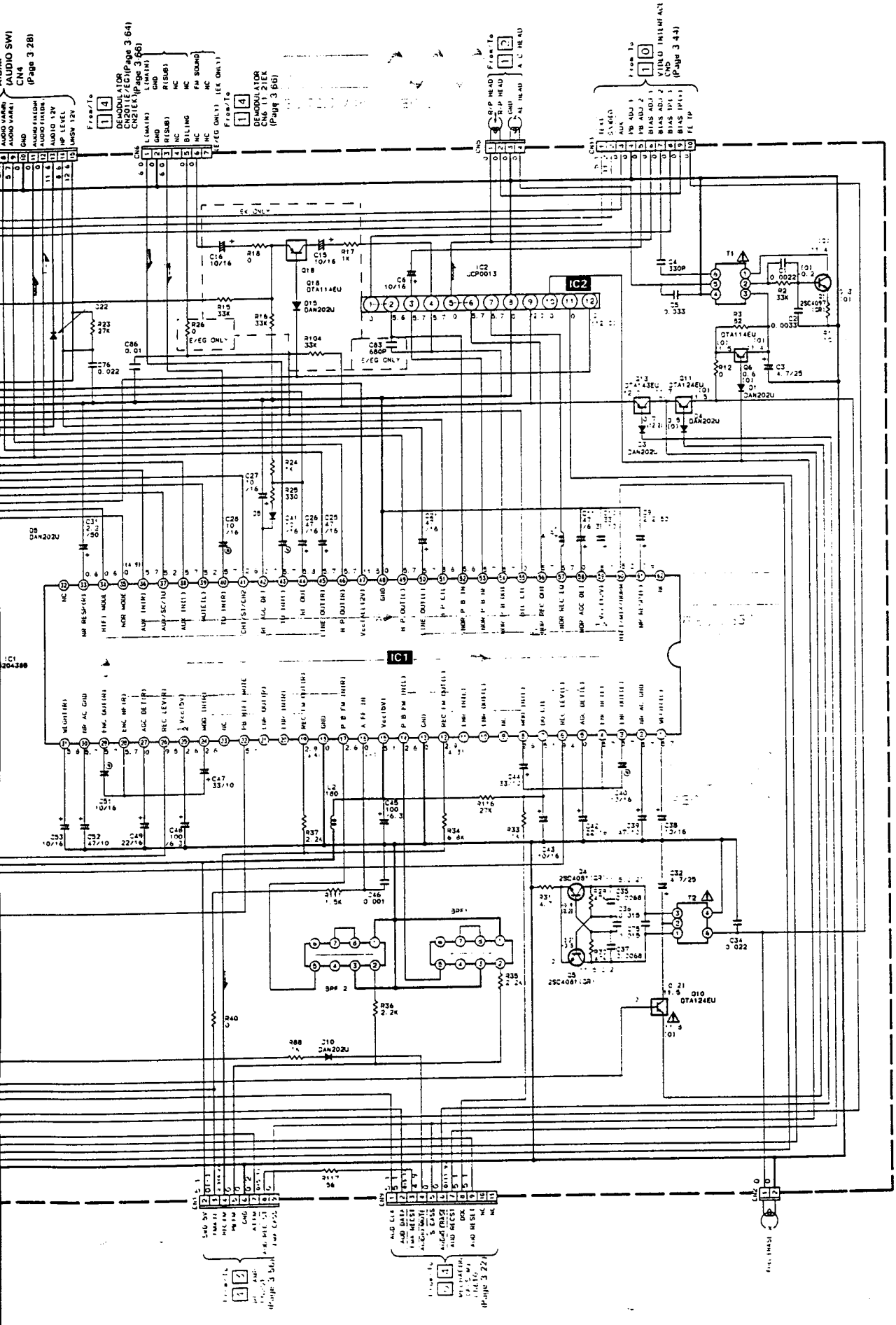

A/S/M PWB ASS'Y
10:4 PB10614 A1 B1 C1
A/S/M PWB ASS'Y
M-CTL
SERVO
ON SCREEN SW
H DR
ASPECT
SLOW D.
IC701
IC901
IC902
IC903
IC904
IC905
IC906
IC907
IC908
IC909
IC910
IC911
IC912
IC913
IC914
IC915
IC916
IC917
IC918
IC919
IC920
IC921
IC922
IC923
IC924
IC925
IC926
IC927
IC928
IC929
IC930
IC931
IC932
IC933
IC934
IC935
IC936
IC937
IC938
IC939
IC940

3.17 AUDIO UNIT SCHEMATIC DIAGRAM

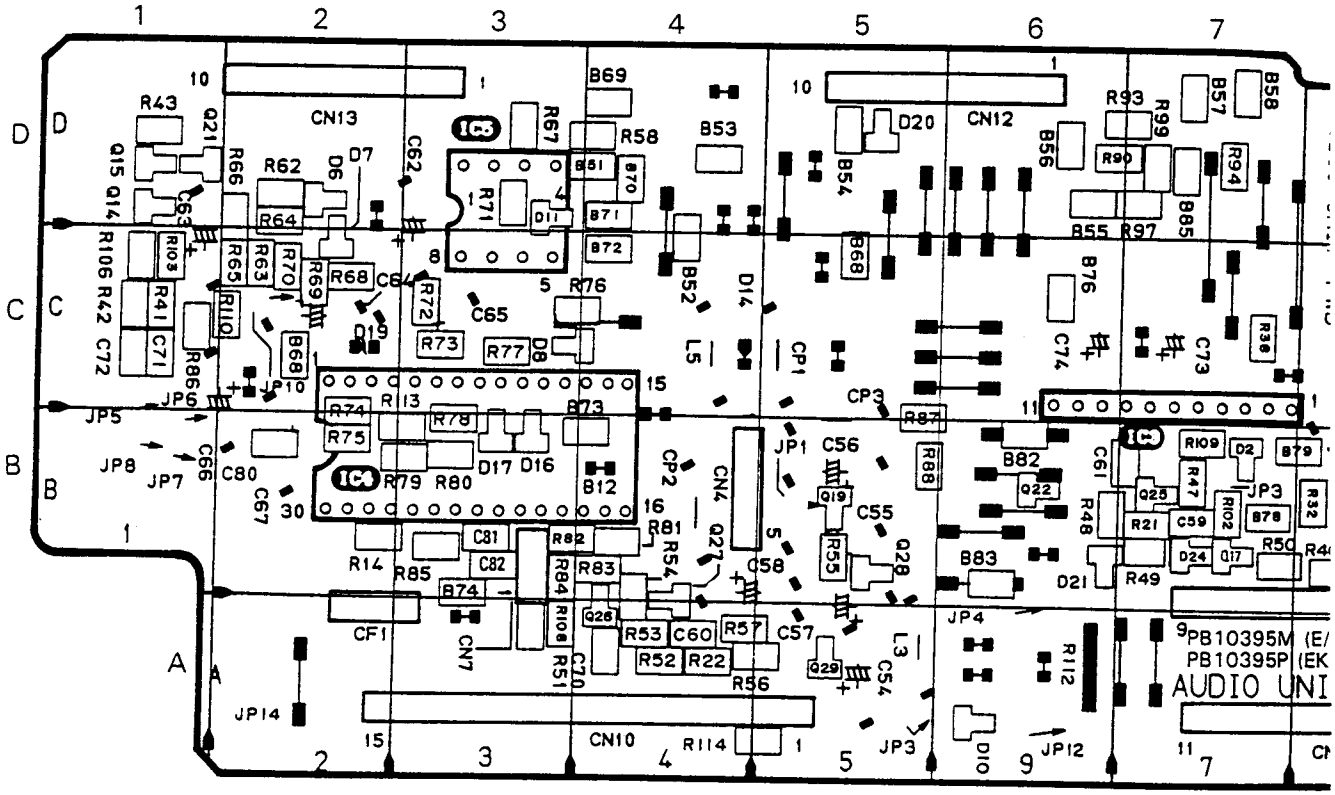


RAM

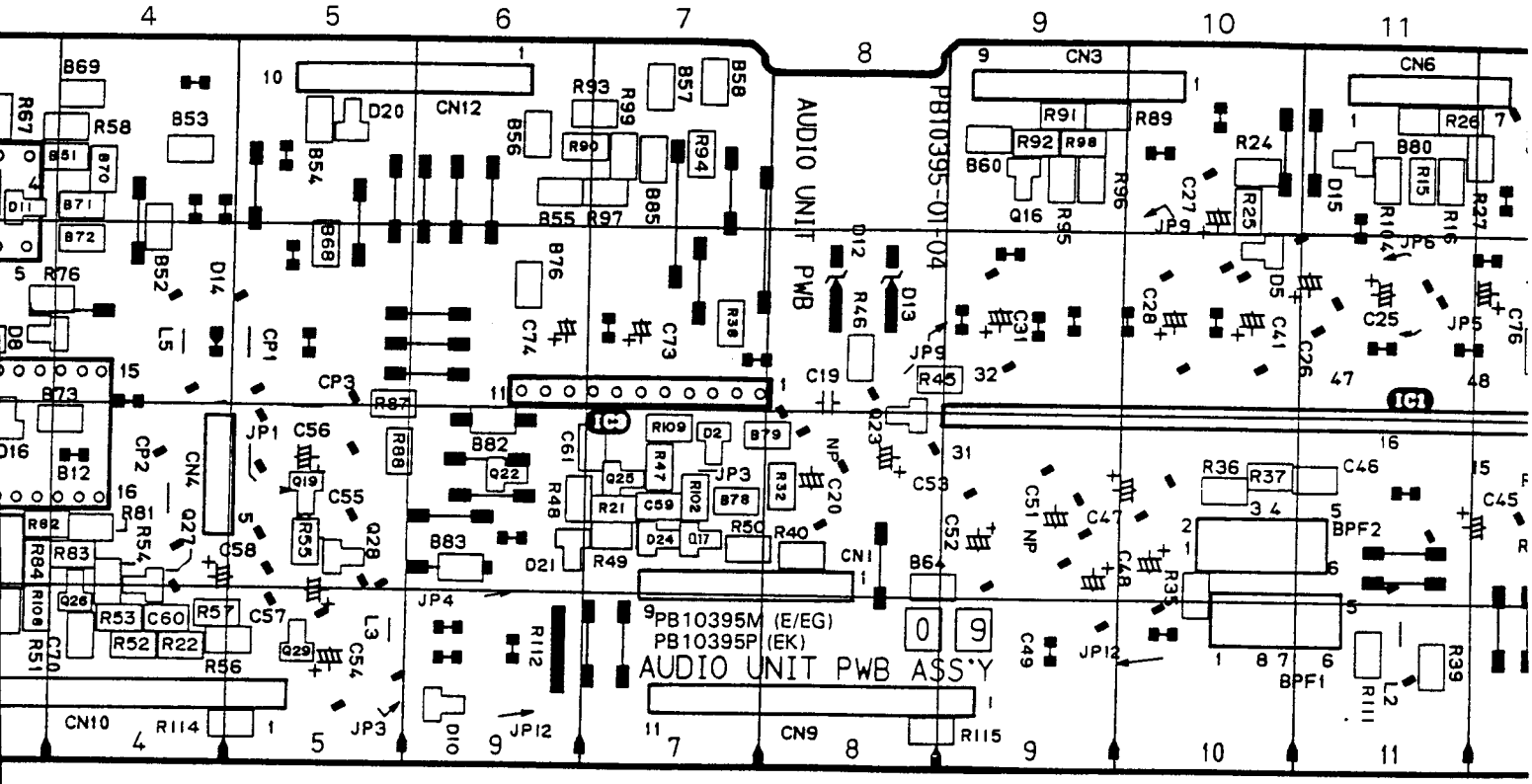



IC1
IC2
EX ONLY
E/EG ONLY

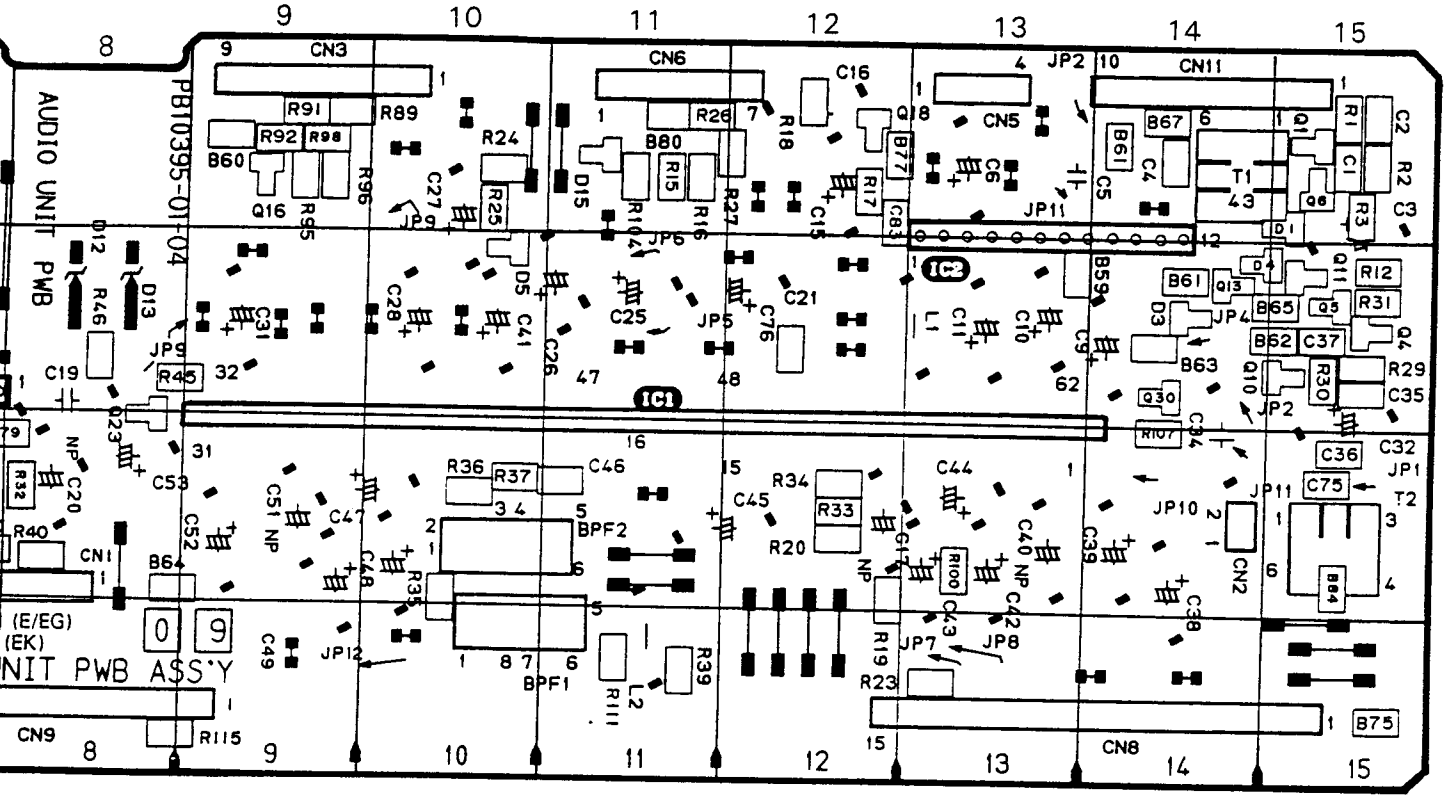
3.18 AUDIO UNIT CIRCUIT BOARD



REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.
TRANSISTOR		DIODE		RESISTOR		RE
Q1	D-15	D1	C-15	R1	D-15	R47
Q4	C-15	D2	B-7	R2	D-15	R48
Q5	C-15	D3	C-14	R3	C-15	R49
Q6	C-15	D4	C-15	R12	C-15	R50
Q10	B-15	D5	C-10	R14	B-3	R51
Q11	C-15	D6	C-2	R15	D-11	R52
Q13	C-14	D7	C-2	R16	D-11	R53
Q14	C-1	D8	C-4	R18	D-12	R54
Q15	D-1	D10	A-6	R19	A-13	R55
Q16	C-9	D11	C-3	R20	B-12	R56
Q17	A-7	D12	C-8	R21	B-7	R57
Q18	D-12	D13	C-8	R22	A-4	R58
Q19	B-5	D14	C-5	R23	A-13	R62
Q21	D-2	D15	D-11	R24	D-10	R63
Q22	B-6	D16	B-3	R25	C-10	R64
Q23	B-8	D17	B-3	R26	D-12	R65
Q24	A-7	D19	C-2	R27	D-12	R66
Q25	B-7	D20	D-5	R29	C-15	R67
Q26	A-4	D21	A-7	R30	B-15	R68
Q27	A-4			R31	C-15	R69
Q28	A-5			R32	B-8	R70
Q29	A-5			R33	B-12	R71
Q30	B-14			R34	B-12	R72
				R35	A-10	R73
				R36	B-10	R74
				R37	B-10	R75
				R38	C-7	R76
				R39	A-11	R77
				R40	A-8	R78
				R41	C-1	R79
				R42	C-1	R80
				R43	D-1	R81
				R45	B-9	R82
				R46	B-8	R83

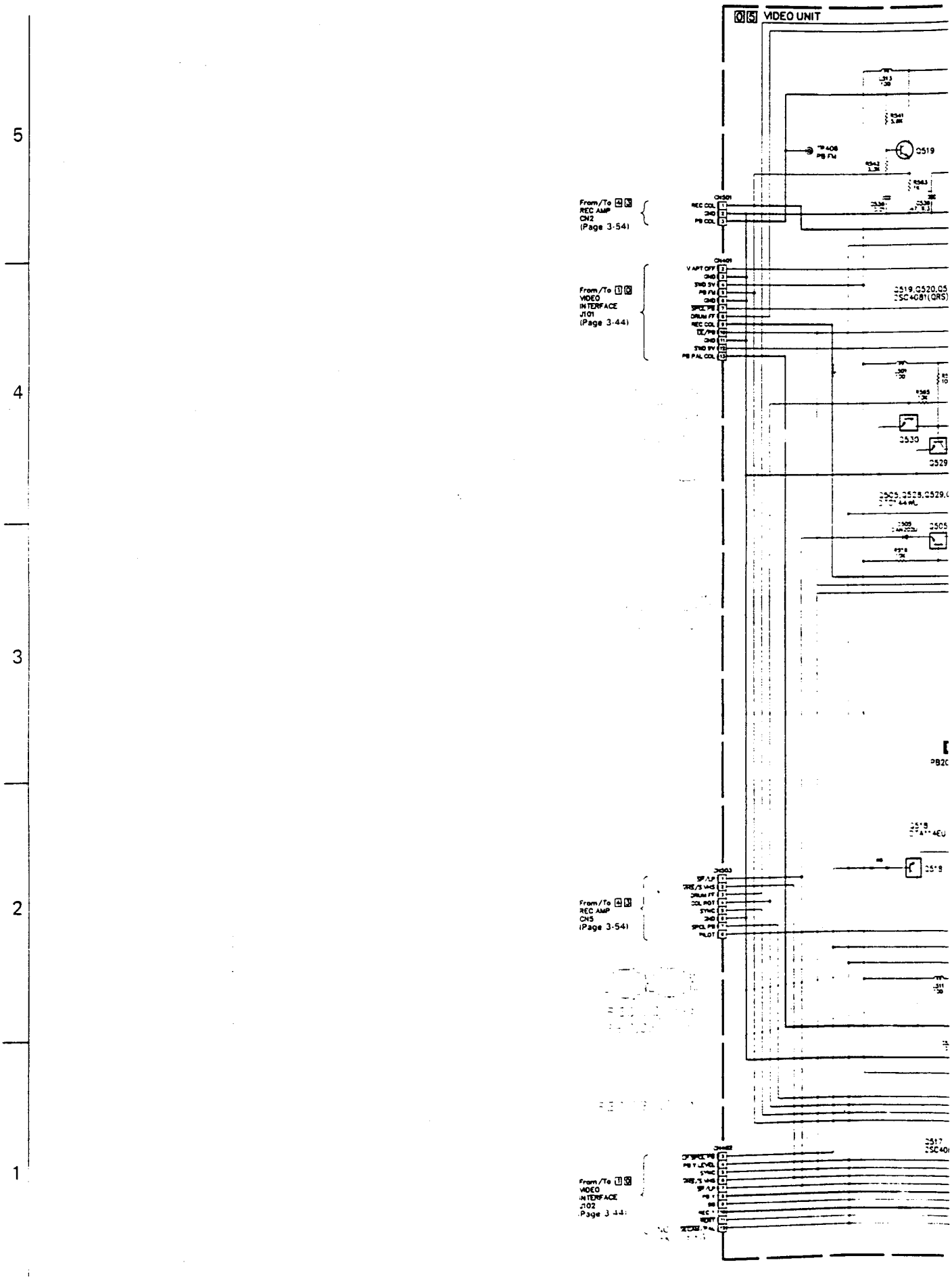


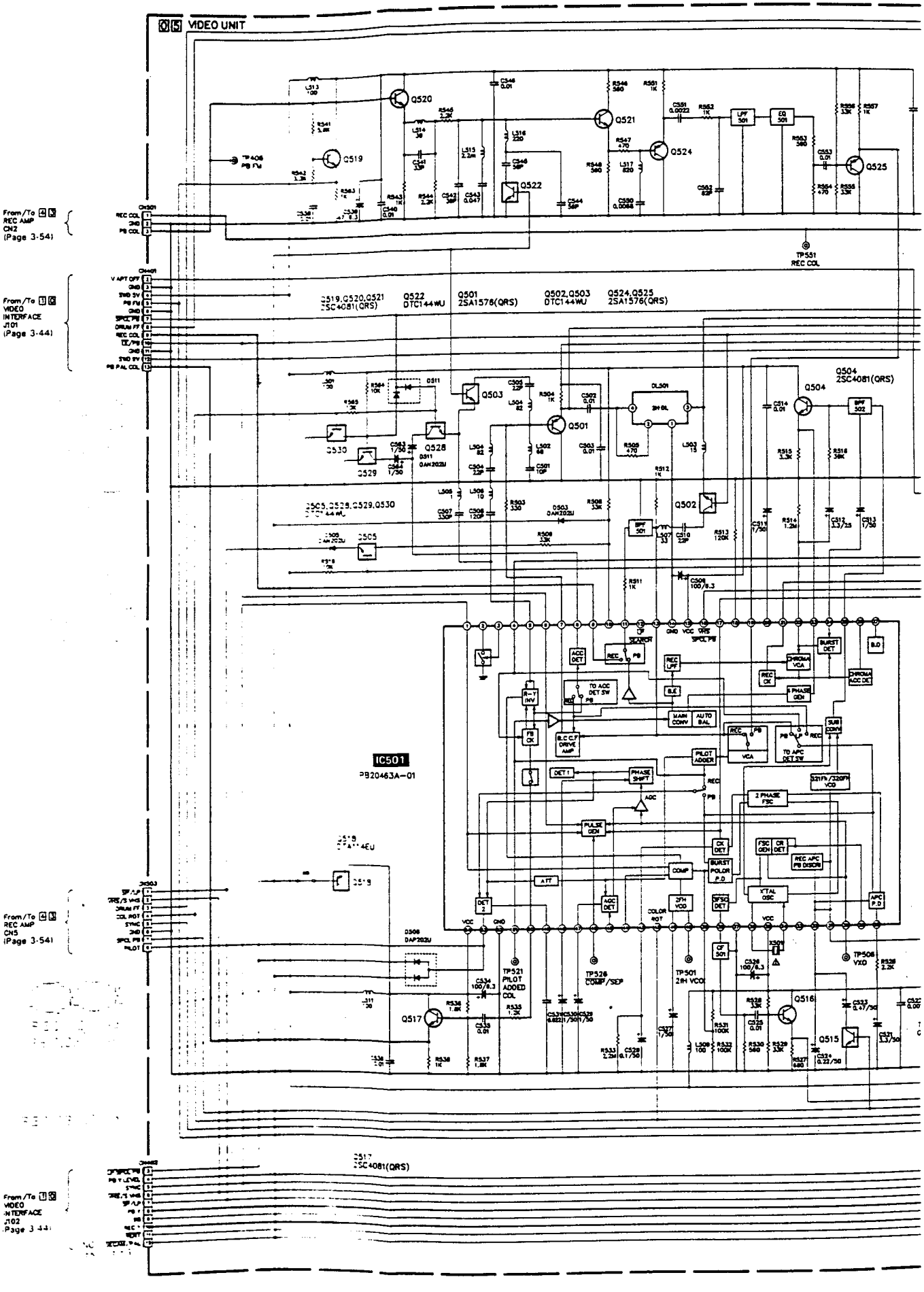
REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		DIODE		RESISTOR		RESISTOR		RESISTOR				CAPACITOR		CAPACITOR	
Q1	D-15	D1	C-15	R1	D-15	R47	B-7	R84	A-4			C1	D-15	C47	B-10
Q4	C-15	D2	B-7	R2	D-15	R48	B-7	R85	A-3			C2	D-15	C48	A-10
Q5	C-15	D3	C-14	R3	C-15	R49	A-7	R86	C-2			C3	C-15	C49	A-10
Q6	C-15	D4	C-15	R12	C-15	R50	A-8	R87	B-6			C4	D-14	C51	A-9
Q10	B-15	D5	C-10	R14	B-3	R51	A-4	R88	B-6			C5	C-14	C52	A-9
Q11	C-15	D6	C-2	R15	D-11	R52	A-4	R89	D-10			C6	D-13	C53	B-8
Q13	C-14	D7	C-2	R16	D-11	R53	A-4	R90	D-7			C9	C-14	C54	A-5
Q14	C-1	D8	C-4	R18	D-12	R54	A-4	R91	D-9			C10	C-13	C55	B-5
Q15	D-1	D10	A-6	R19	A-13	R55	A-5	R92	D-9			C11	C-13	C56	B-5
Q16	C-9	D11	C-3	R20	B-12	R56	A-5	R93	D-7			C15	D-12	C57	A-5
Q17	A-7	D12	C-8	R21	B-7	R57	A-5	R94	D-7			C16	D-12	C58	A-5
Q18	D-12	D13	C-8	R22	A-4	R58	D-4	R95	C-9			C17	A-13	C59	B-7
Q19	B-5	D14	C-5	R23	A-13	R62	C-2	R96	C-9			C19	B-8	C60	A-4
Q21	D-2	D15	D-11	R24	D-10	R63	C-2	R97	C-7			C20	B-8	C61	B-7
Q22	B-6	D16	B-3	R25	C-10	R64	C-2	R98	D-9			C21	C-12	C62	C-3
Q23	B-8	D17	B-3	R26	D-12	R65	C-2	R99	D-7			C25	C-11	C63	C-2
Q24	A-7	D19	C-2	R27	D-12	R66	C-2	R100	A-13			C26	C-11	C64	C-2
Q25	B-7	D20	D-5	R29	C-15	R67	D-3	R102	B-7			C27	C-10	C65	C-3
Q26	A-4	D21	A-7	R30	B-15	R68	C-2	R103	C-1			C28	C-10	C66	B-2
Q27	A-4			R31	C-15	R69	C-2	R104	D-11			C31	C-9	C67	B-2
Q28	A-5			R32	B-8	R70	C-2	R106	C-1			C32	B-15	C70	A-4
Q29	A-5			R33	B-12	R71	C-3	R107	B-14			C34	B-14	C71	C-1
Q30	B-14			R34	B-12	R72	C-3	R108	A-3			C35	B-15	C72	C-1
				R35	A-10	R73	C-3	R109	B-7			C36	B-15	C73	C-7
				R36	B-10	R74	B-2	R110	C-2			C37	C-15	C74	C-7
				R37	B-10	R75	B-2	R111	A-11			C38	A-14	C75	B-15
				R38	C-7	R76	C-4	R112	A-7			C39	A-14	C76	C-12
				R39	A-11	R77	C-3	R113	B-3			C40	A-13	C80	B-2
				R40	A-8	R78	B-3	R114	A-5			C41	C-10	C81	B-3
				R41	C-1	R79	B-3	R115	A-9			C42	A-13	C82	A-3
				R42	C-1	R80	B-3					C43	A-13	C83	C-13
				R43	D-1	R81	B-4					C44	B-13		
				R45	B-9	R82	B-4					C45	B-12		
				R46	B-8	R83	A-4					C46	B-11		

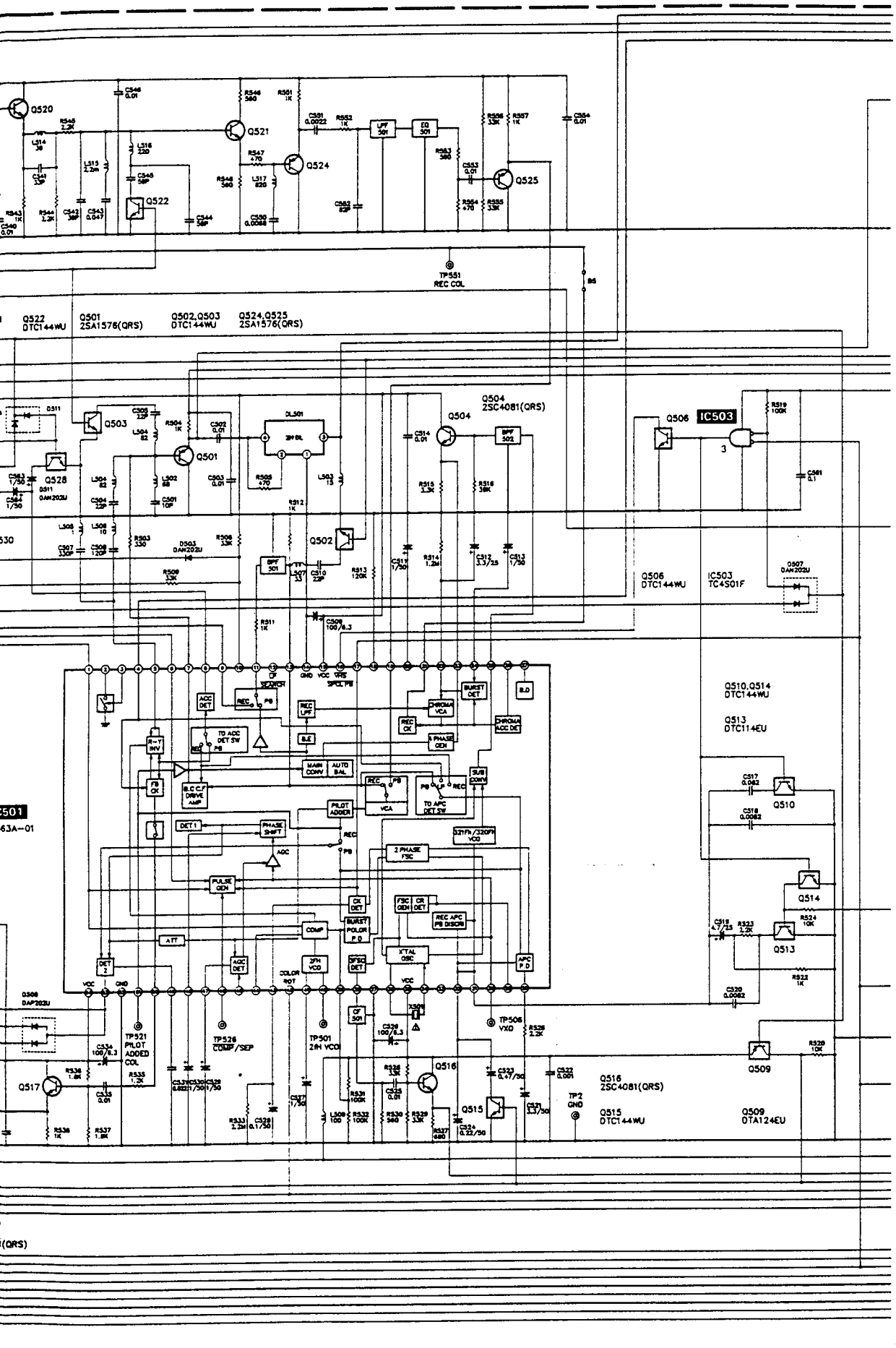


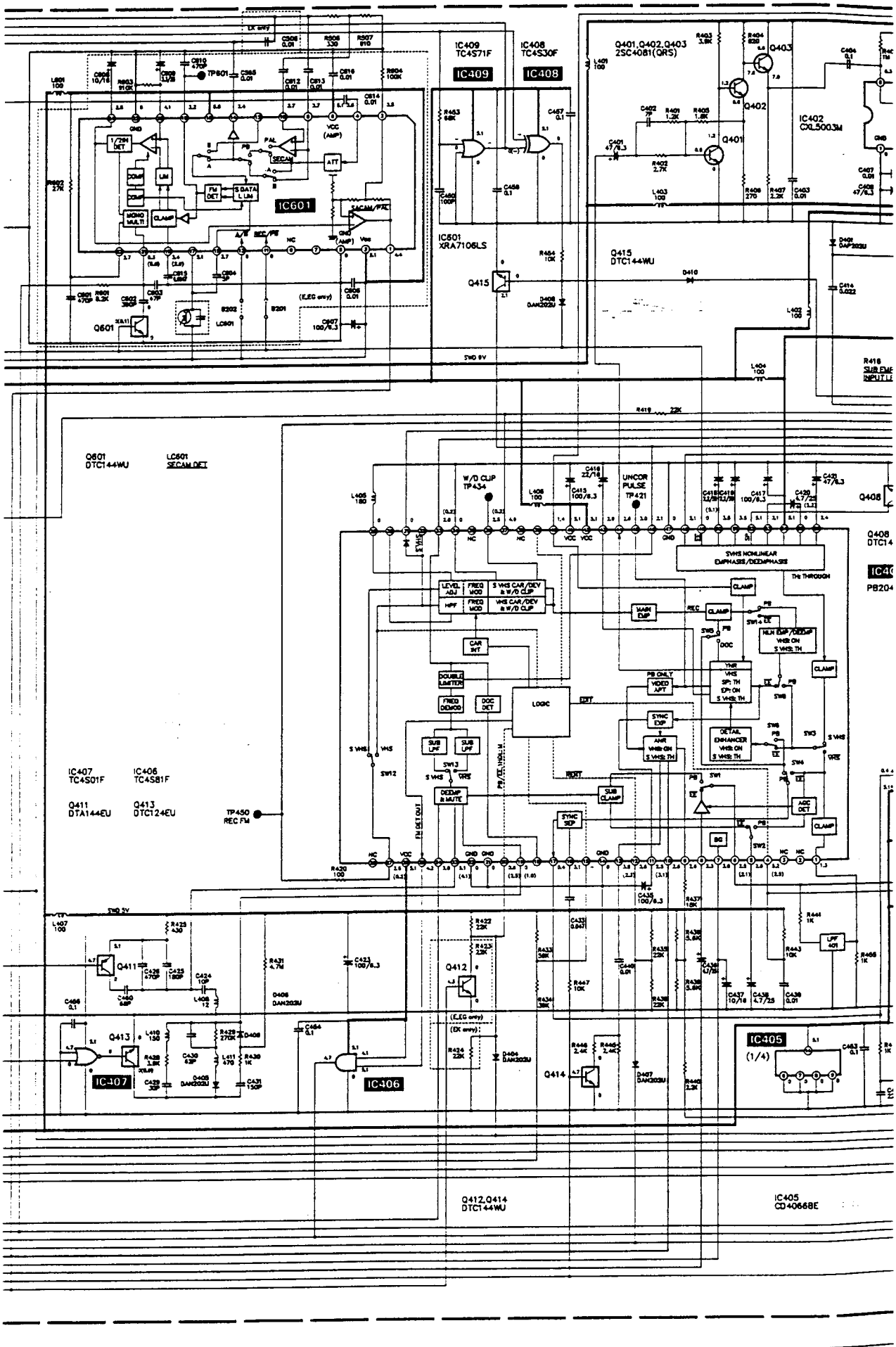
REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
RESISTOR		RESISTOR		CAPACITOR		CAPACITOR	
R47	B-7	R84	A-4	C1	D-15	C47	B-10
R48	B-7	R85	A-3	C2	D-15	C48	A-10
R49	A-7	R86	C-2	C3	C-15	C49	A-10
R50	A-8	R87	B-6	C4	D-14	C51	A-9
R51	A-4	R88	B-6	C5	C-14	C52	A-9
R52	A-4	R89	D-10	C6	D-13	C53	B-8
R53	A-4	R90	D-7	C9	C-14	C54	A-5
R54	A-4	R91	D-9	C10	C-13	C55	B-5
R55	A-5	R92	D-9	C11	C-13	C56	B-5
R56	A-5	R93	D-7	C15	D-12	C57	A-5
R57	A-5	R94	D-7	C16	D-12	C58	A-5
R58	D-4	R95	C-9	C17	A-13	C59	B-7
R62	C-2	R96	C-9	C19	B-8	C60	A-4
R63	C-2	R97	C-7	C20	B-8	C61	B-7
R64	C-2	R98	D-9	C21	C-12	C62	C-3
R65	C-2	R99	D-7	C25	C-11	C63	C-2
R66	C-2	R100	A-13	C26	C-11	C64	C-2
R67	D-3	R102	B-7	C27	C-10	C65	C-3
R68	C-2	R103	C-1	C28	C-10	C66	B-2
R69	C-2	R104	D-11	C31	C-9	C67	B-2
R70	C-2	R106	C-1	C32	B-15	C70	A-4
R71	C-3	R107	B-14	C34	B-14	C71	C-1
R72	C-3	R108	A-3	C35	B-15	C72	C-1
R73	C-3	R109	B-7	C36	B-15	C73	C-7
R74	B-2	R110	C-2	C37	C-15	C74	C-7
R75	B-2	R111	A-11	C38	A-14	C75	B-15
R76	C-4	R112	A-7	C39	A-14	C76	C-12
R77	C-3	R113	B-3	C40	A-13	C80	B-2
R78	B-3	R114	A-5	C41	C-10	C81	B-3
R79	B-3	R115	A-9	C42	A-13	C82	A-3
R80	B-3			C43	A-13	C83	C-13
R81	B-4			C44	B-13		
R82	B-4			C45	B-12		
R83	A-4			C46	B-11		

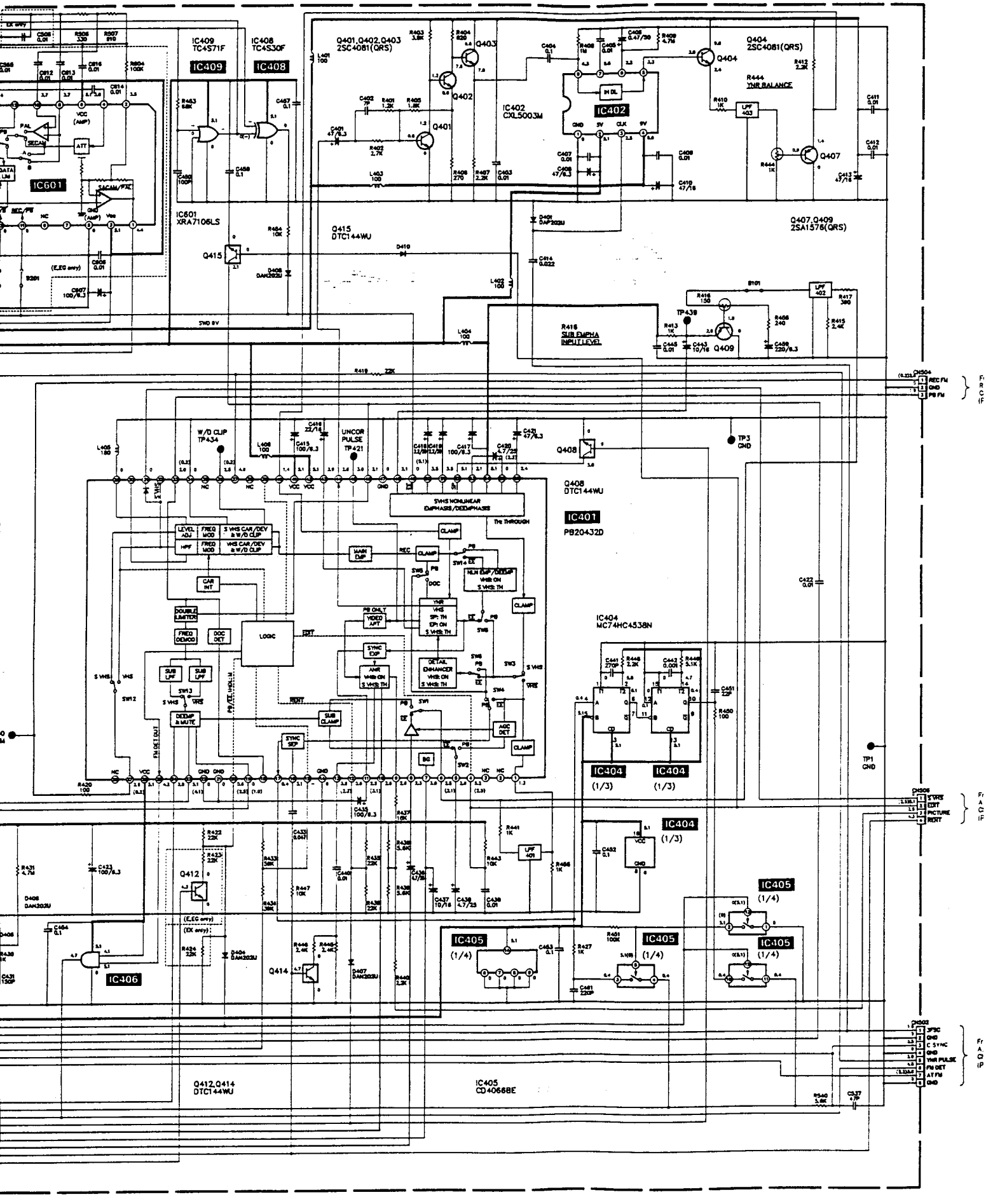
3.19 VIDEO UNIT SCHEMATIC DIAGRAM

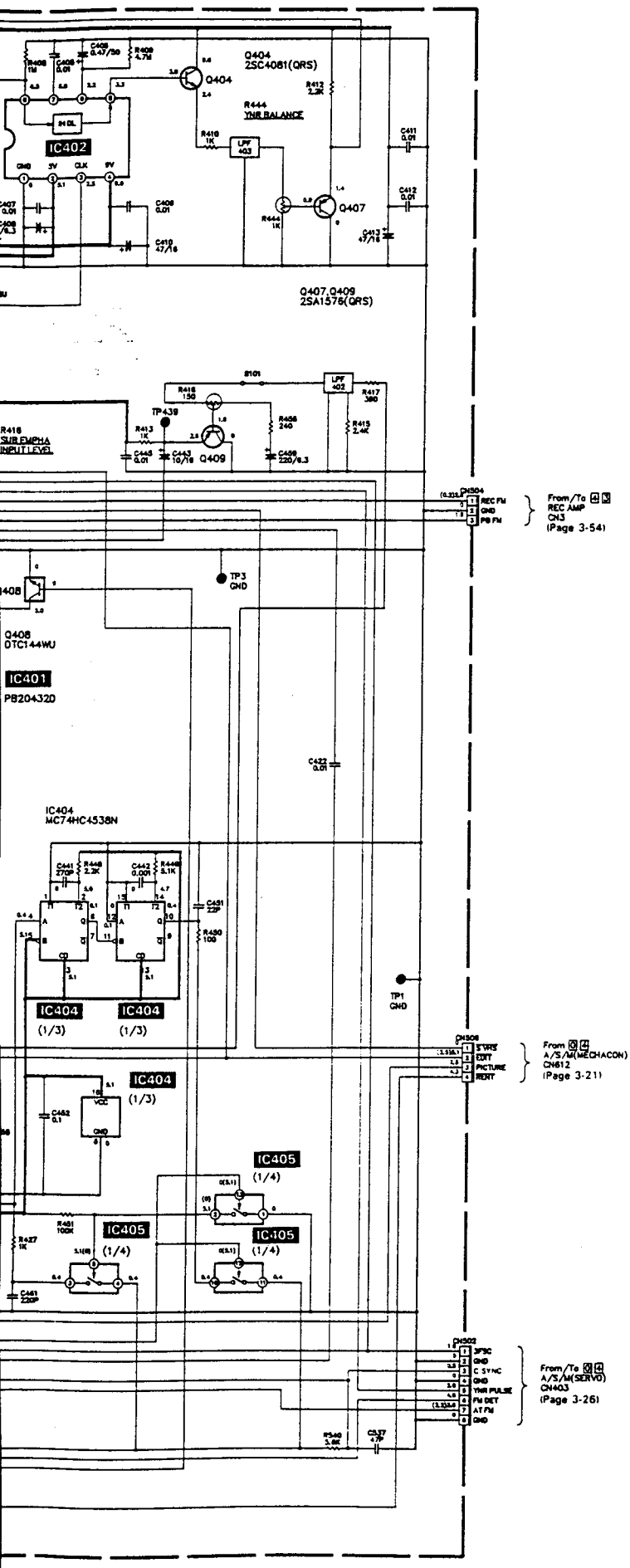



5 VIDEO UNIT
From/To 4 5 REC AMP CN2 (Page 3-54)
From/To 1 6 VIDEO INTERFACE J101 (Page 3-44)
From/To 4 5 REC AMP CN5 (Page 3-54)
From/To 1 6 VIDEO INTERFACE J102 (Page 3-44)
Q519,Q520,Q521 2SC4081(QRS)
Q522 DTC144WU
Q501 2SA1576(QRS)
Q502,Q503 DTC144WU
Q524,Q525 2SA1576(QRS)
Q504 2SC4081(QRS)
IC501
PB20463A-01
TP551 REC COL
TP521 PILOT ADDED COL
TP526 COMP/SEP
TP501 2fH VCO
TP506 VXO
Q517 2SC4081(QRS)

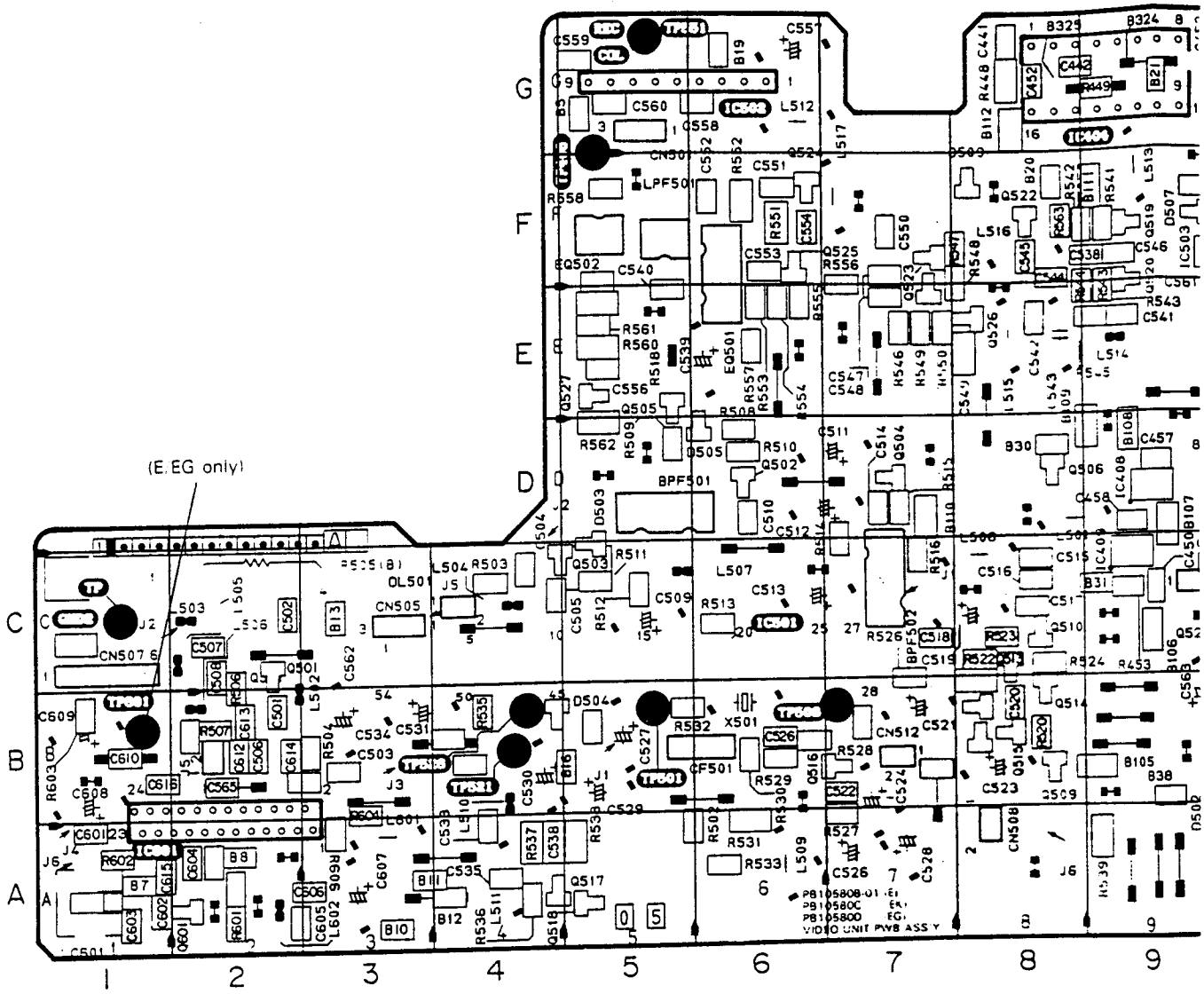

Q520
Q521
Q524
Q525
Q522
TP551
REC COL
Q522
DTC144WU
Q501
2SA1576(QRS)
Q502,Q503
DTC144WU
Q524,Q525
2SA1576(QRS)
Q503
Q501
Q528
Q504
2SC4081(QRS)
Q504
Q506
IC503
Q502
Q506
DTC144WU
IC503
TC4S01F
Q510,Q514
DTC144WU
Q513
DTC114EU
Q510
Q514
Q513
Q509
Q509
DTA124EU
Q516
2SC4081(QRS)
Q517
Q515
DTC144WU
TP521
PILOT
ADDED
COL
TP526
COMP/SEP
TP501
2FH VCO
TP506
VXO
TP2
GND


IC409
TC4S71F
IC408
TC4S30F
Q401,Q402,Q403
2SC4081(QRS)
IC402
CXL5003M
IC601
IC501
XRA7106LS
Q415
DTC144WU
Q601
DTC144WU
LC601
SECAM DET
W/D CLIP
TP434
UNCOR
PULSE
TP421
S VHS NONLINEAR
EMPHASIS/DEEMPHASIS
LOGIC
IC407
TC4S01F
IC406
TC4S81F
Q411
DTA144EU
Q413
DTC124EU
TP450
REC FM
IC407
IC406
Q412
Q414
IC405
(1/4)
Q412,Q414
DTC144WU
IC405
CD4066BE

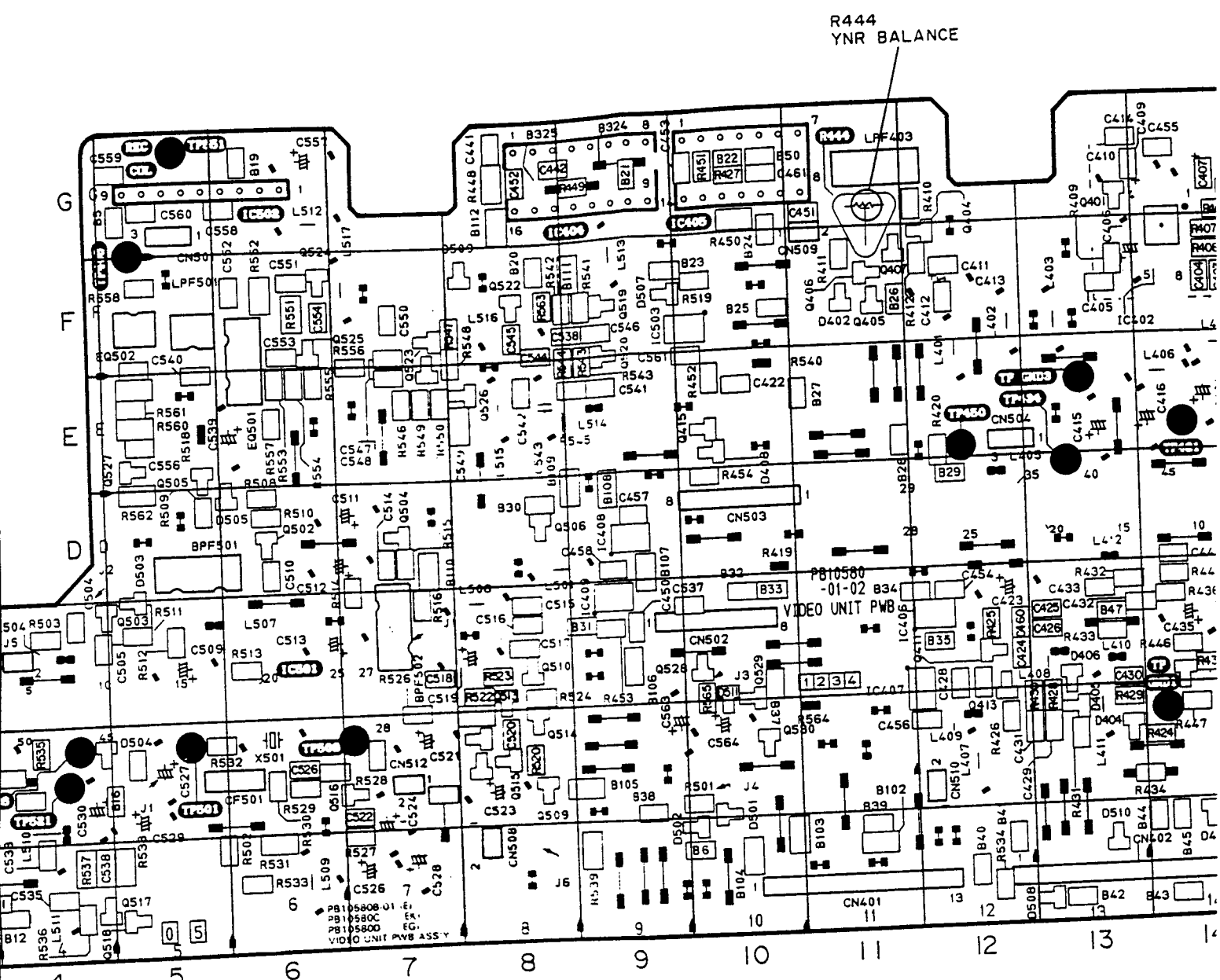

IC409
TC4S71F
IC408
TC4S30F
IC601
XRA7106LS
IC402
CXL5003M
IC401
PB20432D
IC404
MC74HC4538N
IC405
CD40668E
IC406
Q401,Q402,Q403
2SC4081(QRS)
Q404
2SC4081(QRS)
Q407,Q409
2SA1576(QRS)
Q415
DTC144WU
Q408
DTC144WU
Q412,Q414
DTC144WU
R444
YNR BALANCE
R416
SUB EMPHA
INPUT LEVEL
W/O CLIP
TP434
UNCOR
PULSE
TP421
TP438
TP3
GND
TP1
GND
CN504
REC FM
GND
PB FM
CN505
S VHS
EDIT
PICTURE
RENT
CN503
3FSC
GND
C SYNC
GND
YNR PULSE
FM DET
ATF FM
GND
SVHS NONLINEAR
EMPHASIS/DEEMPHASIS
LEVEL ADJ
FREQ MOD
S VHS CAR/DEV & W/O CLIP
HPF
VHS CAR/DEV & W/O CLIP
CLAMP
MAIN DUP
REC
PB
CAR INT
DOUBLE LIMITER
FREQ DEMOD
DOC DET
LOGIC
SUB LPF
DEEMP & MUTE
SUB CLAMP
SYNC SEP
YNR
VIDEO APT
SYNC EXP
DETAIL ENHANCER
AGC DET
BG
LPF 401
LPF 402
LPF 403
IN DL
SECAM/PAL
ATT
VCC (AMP)
(E,EG only)
(EX only)


Q404
2SC4081(QRS)
Q404
R444
TNR BALANCE
IC402
LPF
403
Q407
Q407,Q409
2SA1576(QRS)
S101
LPF
402
TP439
Q409
CN504
REC FM
GND
PB FM
From/To
REC AMP
CN3
(Page 3-54)
TP3
GND
Q408
DTC144WU
IC401
P8204320
IC404
MC74HC4538N
IC404
(1/3)
IC404
(1/3)
TP1
GND
CN506
S WFS
EDIT
PICTURE
RENT
From
A/S/M(MECHACON)
CN612
(Page 3-21)
IC404
(1/3)
IC405
(1/4)
IC405
(1/4)
IC405
(1/4)
CN502
SFSC
GND
C SYNC
GND
TNR PULSE
FM DET
AT FM
GND
From/To
A/S/M(SERVO)
CN403
(Page 3-26)

3.20 VIDEO UNIT CIRCUIT BOARD



REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		TRANSISTOR		DIODE		RESISTOR		RESISTOR		RESISTOR		RESISTOR	
Q401	F-14	Q518	A-4	D401	G-13	R401	F-15	R431	B-13	R505	C-4		
Q402	F-14	Q519	F-9	D402	F-11	R402	F-15	R432	C-13	R506	B-4		
Q403	F-14	Q520	F-9	D404	B-13	R403	F-14	R433	C-13	R507	B-4		
Q404	F-11	Q521	E-7	D405	B-13	R404	F-14	R434	B-13	R508	B-5		
Q405	F-11	Q522	F-8	D406	C-13	R405	G-14	R435	C-14	R509	B-5		
Q406	F-11	Q523	F-7	D407	A-14	R406	G-14	R436	C-13	R510	D-6		
Q407	F-11	Q524	F-6	D408	E-9	R407	F-14	R437	C-14	R511	C-4		
Q408	D-16	Q525	F-6	D501	B-10	R408	F-14	R438	C-14	R512	C-5		
Q409	F-16	Q526	E-7	D502	A-9	R409	F-13	R439	C-14	R513	C-5		
Q410	A-15	Q527	E-4	D503	D-4	R410	G-11	R440	C-15	R514	D-6		
Q411	C-12	Q528	C-9	D504	B-4	R411	F-11	R441	D-15	R515	D-5		
Q412	A-15	Q529	C-10	D505	D-5	R412	F-11	R442	D-15	R516	D-5		
Q413	C-12	Q530	B-10	D507	F-9	R413	F-16	R443	A-15	R518	E-5		
Q414	C-14	Q601	A-1	D508	A-12	R414	E-16	R444	G-11	R519	F-5		
Q415	E-9			D509	F-7	R415	D-16	R445	C-13	R520	B-6		
Q501	C-2			D510	A-13	R416	F-16	R446	C-14	R521	E-5		
Q502	D-6					R417	B-15	R447	B-14	R522	C-7		
Q503	C-4					R418	B-16	R448	G-8	R523	C-5		
Q504	D-7					R419	D-10	R449	G-8	R524	C-5		
Q505	E-5					R420	E-11	R450	G-10	R525	E-7		
Q506	D-8					R421	A-15	R451	G-9	R526	C-7		
Q509	B-8					R422	A-15	R452	F-9	R527	A-6		
Q510	C-8					R423	A-15	R453	C-9	R528	B-6		
Q511	B-7					R424	B-13	R454	D-9	R529	B-6		
Q512	B-7					R425	C-12	R455	D-15	R530	B-6		
Q513	C-8					R426	B-12	R456	F-16	R531	A-6		
Q514	B-8					R427	G-10	R501	B-9	R532	B-5		
Q515	B-8					R428	B-12	R502	A-5	R533	A-5		
Q516	B-6					R429	B-13	R503	C-4	R534	A-5		
Q517	A-4					R430	B-12	R504	B-5	R535	B-4		



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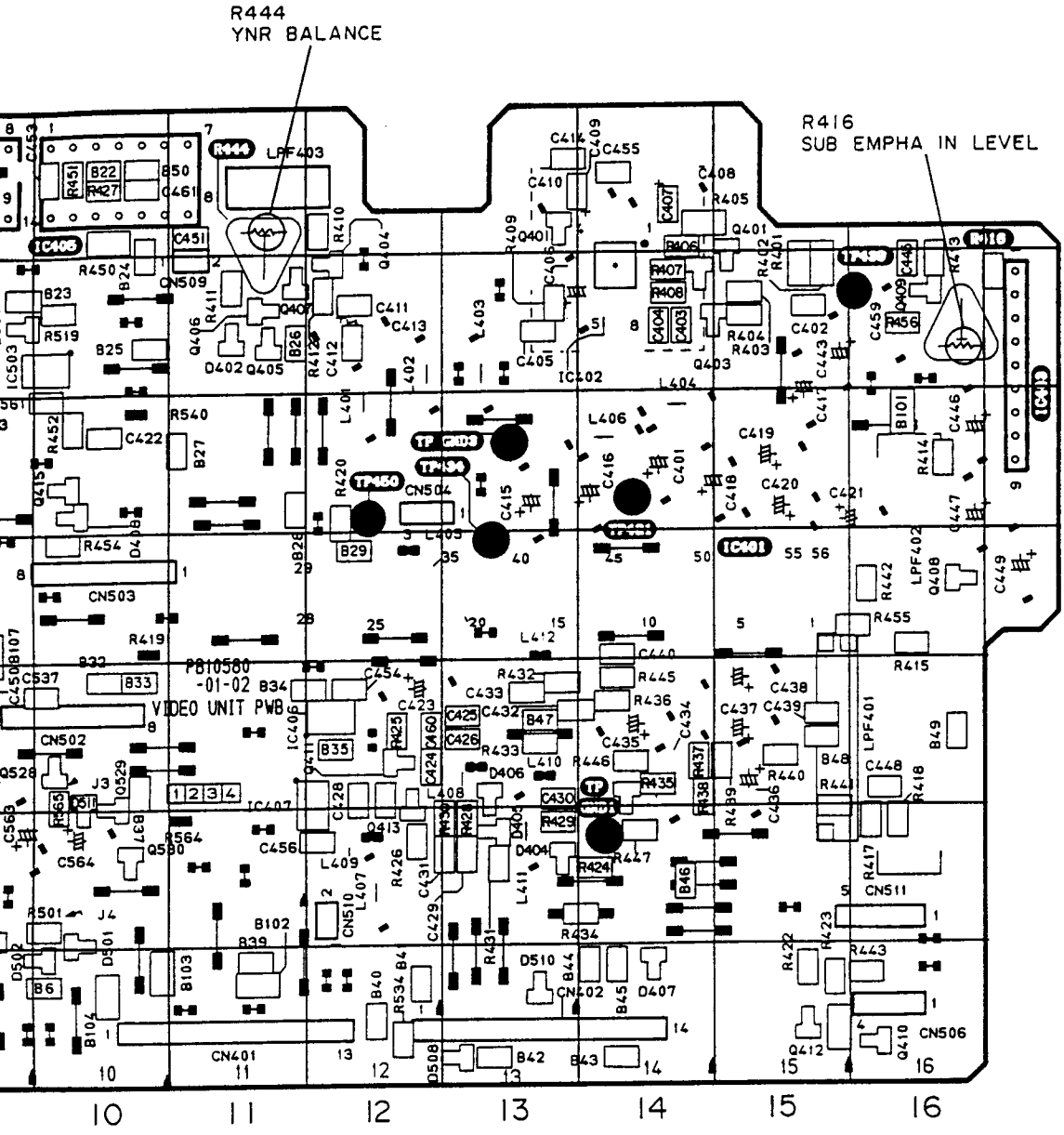
STOR	DIODE		RESISTOR					RESISTOR			RESISTOR		RESISTOR		CAPACITOR		CAPACITOR		CAPACITOR	
A-2	D401	G-13	R401	F-15	R431	B-13	R505				R602	A-1	C401	E-14	C431	B-12	C461	G-10	C53	
F-9	D402	F-11	R402	F-15	R432	C-13	R506				R603	B-1	C402	F-15	C432	C-13	C501	B-2	C53	
F-9	D404	B-13	R403	F-14	R433	B-13	R507				R604	B-3	C403	F-14	C433	C-13	C502	B-2	C53	
E-7	D405	B-13	R404	F-14	R434	B-13	R508				R605	B-2	C404	F-14	C434	C-14	C503	B-3	C53	
F-8	D406	C-13	R405	G-14	R435	C-14	R509						C405	F-13	C435	C-13	C504	C-4	C53	
F-8	D407	A-14	R406	G-14	R436	C-13	R510						C406	F-13	C436	C-14	C505	C-4	C53	
F-7	D408	E-9	R407	F-14	R437	C-14	R511						C407	G-14	C437	C-14	C506	C-2	C53	
F-6	D501	B-10	R408	F-14	R438	C-14	R512						C408	G-14	C438	C-14	C507	C-1	C53	
F-6	D502	A-9	R409	F-13	R439	C-14	R513						C409	G-13	C439	C-15	C508	C-2	C53	
E-7	D503	D-4	R410	G-11	R440	C-15	R514						C410	G-13	C440	D-13	C509	C-5	C53	
E-4	D504	B-4	R411	F-11	R441	D-15	R515						C411	F-12	C441	G-8	C510	D-6	C54	
C-9	D505	D-5	R412	F-11	R442	D-15	R516						C412	F-12	C442	G-8	C511	D-6	C54	
C-10	D507	F-9	R413	F-16	R443	A-15	R518						C413	F-12	C443	F-15	C512	D-6	C54	
B-10	D508	A-12	R414	E-16	R444	G-11	R519						C414	G-13	C444	F-16	C513	C-6	C54	
A-1	D509	F-7	R415	D-16	R445	C-13	R520						C415	E-13	C445	F-16	C514	D-7	C5	
	D510	A-13	R416	F-16	R446	C-14	R521						C416	E-13	C446	E-16	C515	C-8	C5	
			R417	B-15	R447	B-14	R522						C417	F-15	C447	D-16	C516	C-8	C5	
			R418	B-16	R448	G-8	R523						C418	E-14	C448	D-16	C517	C-8	C5	
			R419	D-10	R449	G-8	R524						C419	E-14	C449	C-9	C518	C-7	C5	
			R420	E-11	R450	G-10	R525						C420	E-15	C450	G-10	C519	C-7	C5	
			R421	A-15	R451	G-9	R526						C421	E-15	C451	G-8	C520	B-8	C5	
			R422	A-15	R452	E-9	R527						C422	E-10	C452	G-9	C521	B-7	C5	
			R423	A-15	R453	C-9	R528						C423	C-12	C453	C-12	C522	B-6	C5	
			R424	B-13	R454	D-9	R529						C424	C-12	C454	C-12	C523	B-8	C5	
			R425	C-12	R455	D-15	R530						C425	C-12	C455	G-13	C524	A-7	C5	
			R426	B-12	R456	F-16	R531						C426	C-12	C456	B-11	C525	B-6	C5	
			R427	G-10	R501	B-9	R532						C427	C-12	C457	D-9	C526	A-7	C5	
			R428	B-12	R502	A-5	R533						C428	C-12	C458	D-9	C527	B-5	C5	
			R429	B-13	R503	C-4	R534						C429	B-12	C459	F-16	C528	A-7	C5	
			R430	B-12	R504	B-5	R535						C430	C-13	C460	C-12	C529	B-5	C5	



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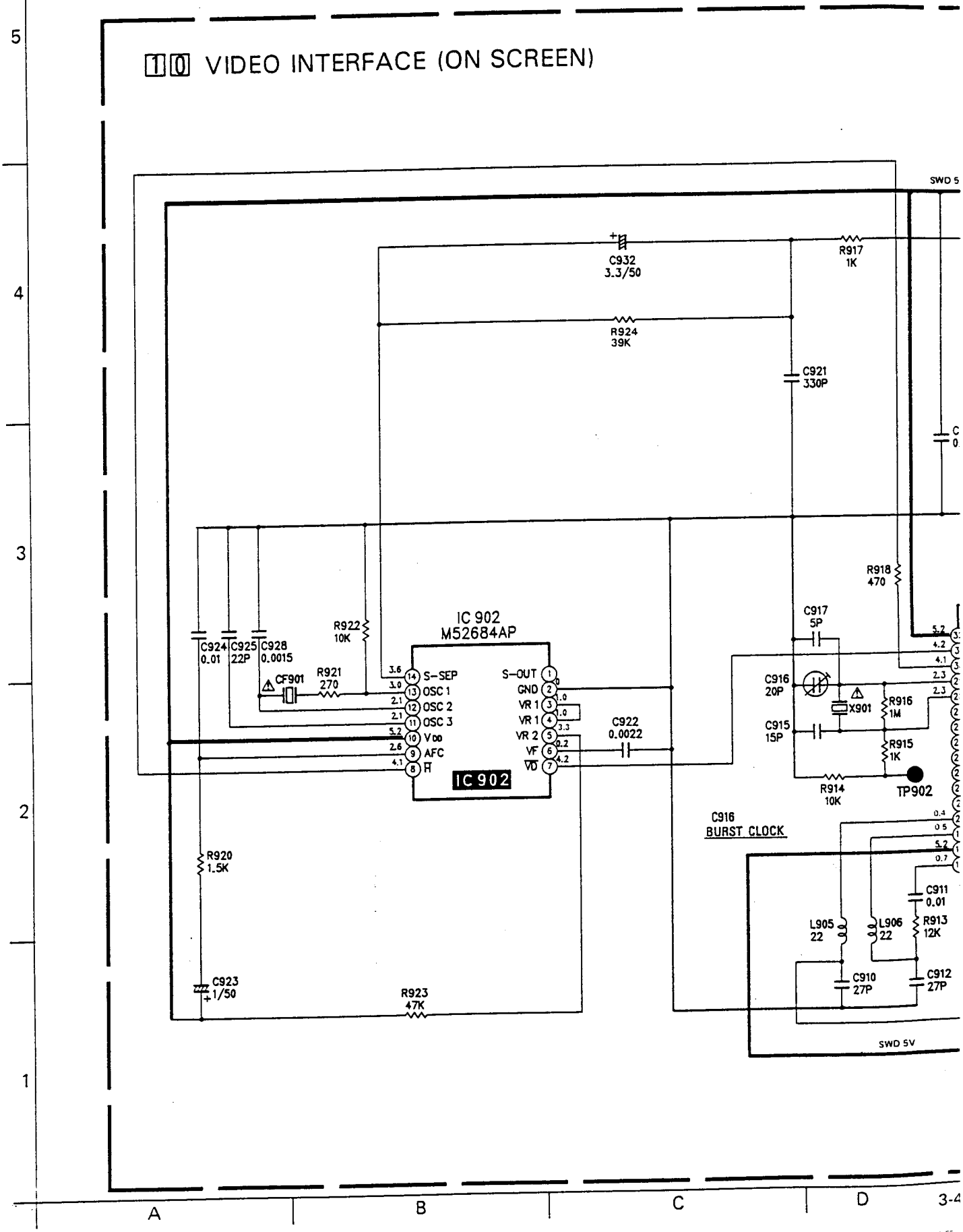
RESISTOR		CAPACITOR		CAPACITOR		CAPACITOR		CAPACITOR		CAPACITOR	
R602	A-1	C401	E-14	C431	B-12	C461	G-10	C530	B-4	C560	G-5
R603	B-1	C402	F-15	C432	C-13	C501	B-2	C531	B-3	C561	E-9
R604	B-3	C403	F-14	C433	C-13	C502	B-2	C532	B-3	C562	B-3
R605	B-2	C404	F-14	C434	C-14	C503	B-3	C533	A-4	C563	C-9
		C405	F-13	C435	C-13	C504	C-4	C534	B-3	C564	B-10
		C406	F-13	C436	C-14	C505	C-4	C535	A-4	C601	A-1
		C407	G-14	C437	C-14	C506	C-2	C536	A-4	C602	A-1
		C408	G-14	C438	C-14	C507	C-1	C537	C-9	C603	A-1
		C409	G-13	C439	C-15	C508	C-2	C538	F-8	C604	A-1
		C410	G-13	C440	D-13	C509	C-5	C539	E-5	C605	A-2
		C411	F-12	C441	G-8	C510	D-6	C540	E-5	C606	A-2
		C412	F-12	C442	G-8	C511	D-6	C541	E-9	C607	A-3
		C413	F-12	C443	F-15	C512	D-6	C542	E-8	C608	B-0
		C414	G-13	C444	F-16	C513	C-6	C543	E-8	C609	B-0
		C415	E-13	C445	F-16	C514	D-7	C544	F-8	C610	B-1
		C416	E-13	C446	E-16	C515	C-8	C545	F-8	C611	B-1
		C417	F-15	C447	D-16	C516	C-8	C546	F-8	C612	B-2
		C418	E-14	C448	C-15	C517	C-8	C547	F-7	C613	B-2
		C419	E-14	C449	D-16	C518	C-7	C548	E-7	C614	B-2
		C420	E-15	C450	C-9	C519	C-7	C549	E-7	C615	A-1
		C421	E-15	C451	G-10	C520	B-8	C550	F-7	C616	B-1
		C422	E-10	C452	G-8	C521	B-7	C551	F-6		
		C423	C-12	C453	G-9	C522	B-6	C552	F-5		
		C424	C-12	C454	C-12	C523	B-8	C553	F-6		
		C425	C-12	C455	G-13	C524	A-7	C554	F-6		
		C426	C-12	C456	B-11	C525	B-6	C555	E-4		
		C427	C-12	C457	D-9	C526	A-7	C556	E-5		
		C428	C-12	C458	D-9	C527	B-5	C557	G-6		
		C429	B-12	C459	F-16	C528	A-7	C558	G-5		
		C430	C-13	C460	C-12	C529	B-5	C559	G-4		

3.21 ON SCREEN SCHEMATIC DIAGRAM

NOTE: Voltages are DC-measured with a digital voltmeter during stop and tuner mode.



NOTE: Voltages are DC-measured with a digital voltmeter during stop and tuner mode.

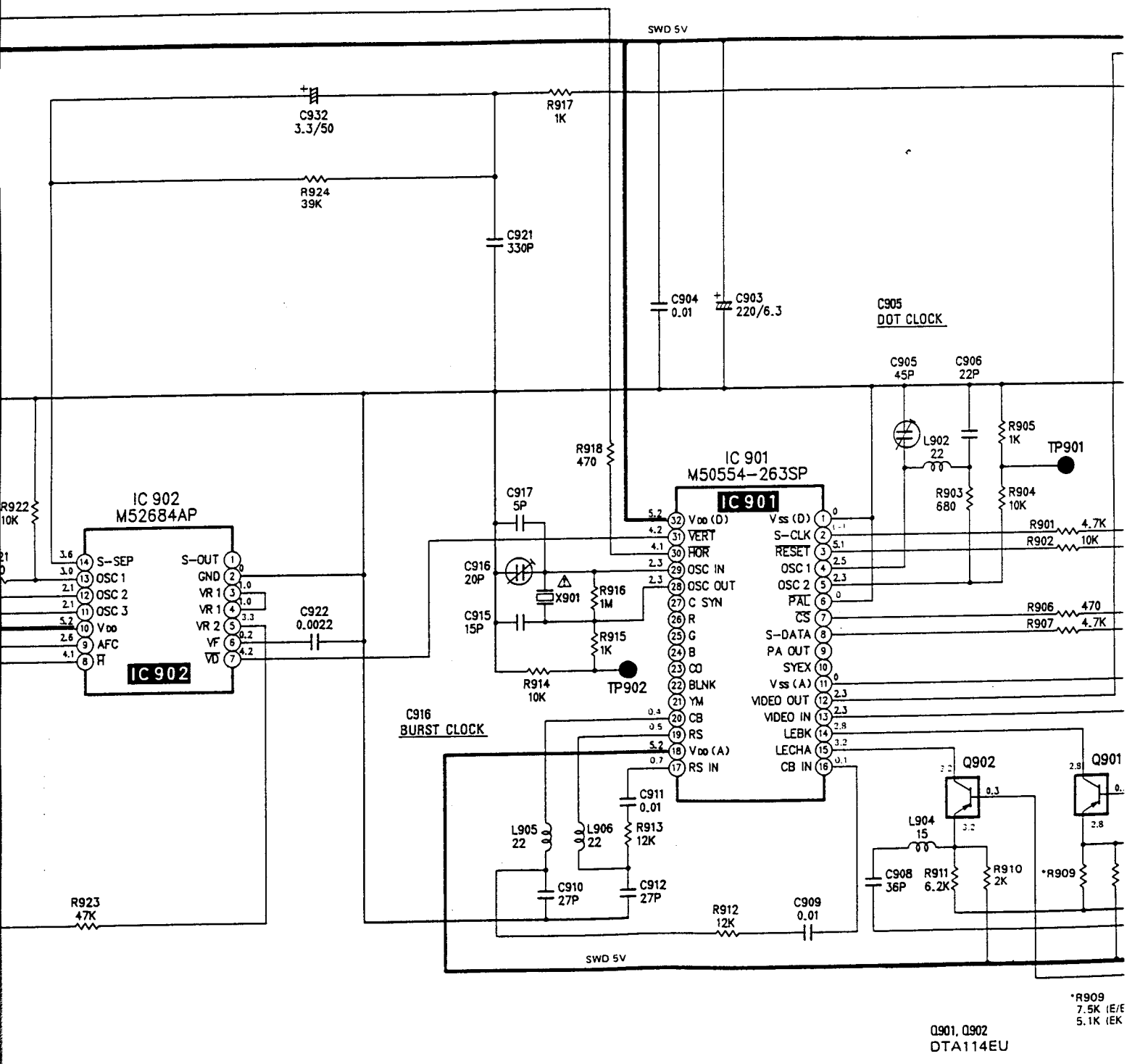
From/To 1 0
VIDEO INTERFACE
CN27
(Page 3-44)

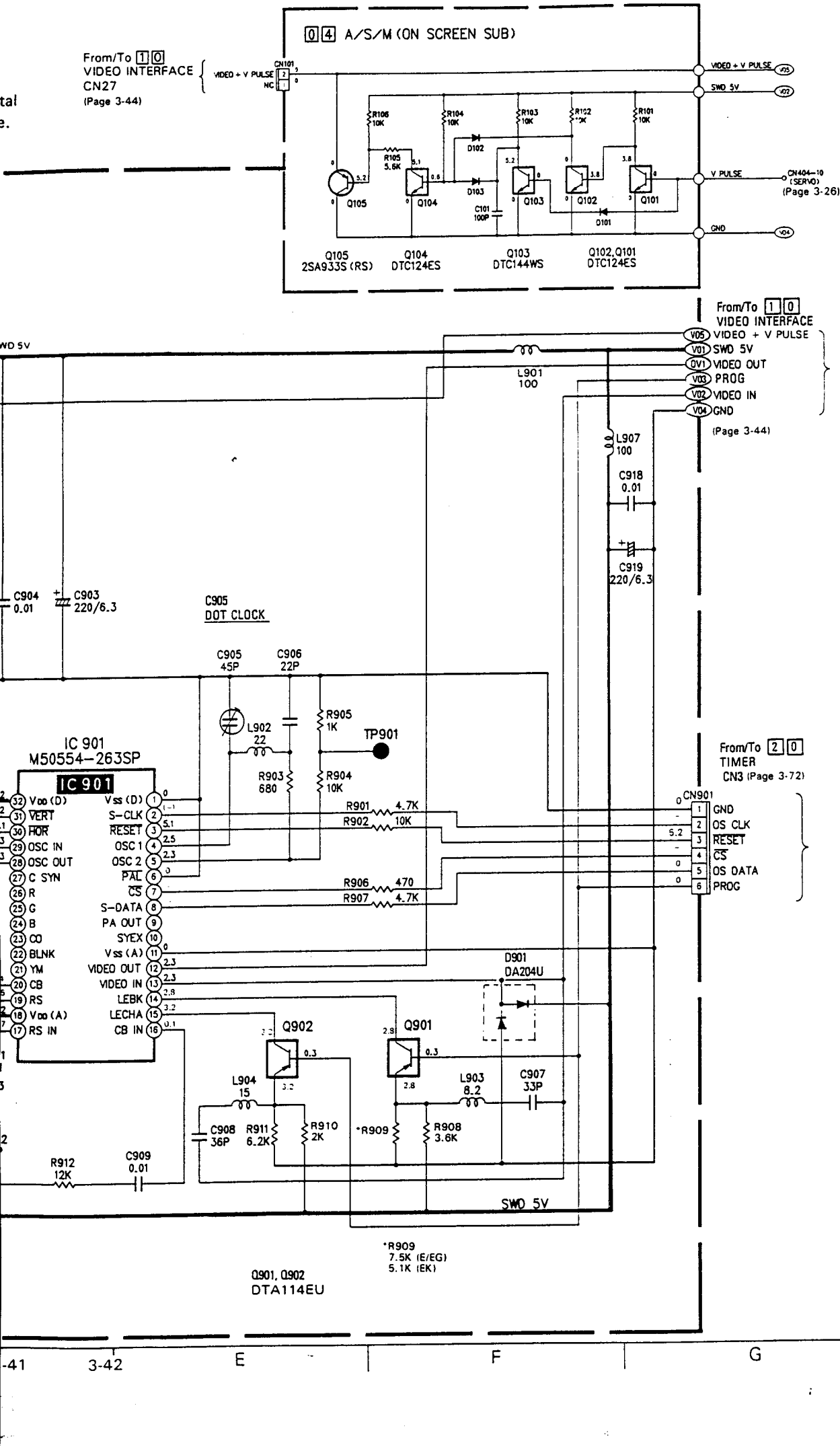
0 4 A/S/M (ON S

CN101
VIDEO + V PULSE
NC

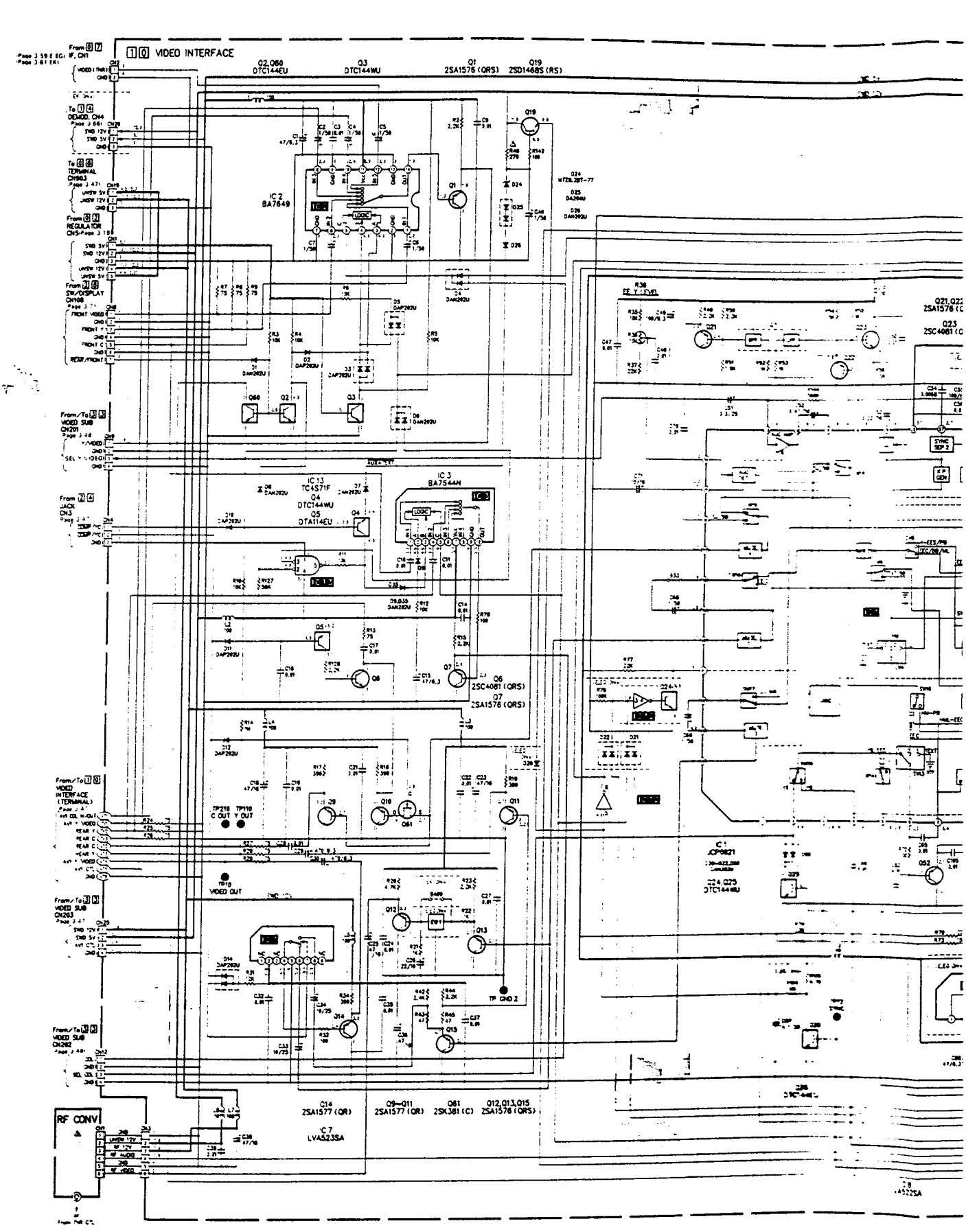
R106 10K
R105 5.6K
Q105
Q104
Q105 2SA933S (RS)
Q104 DTC124E

ERFACE (ON SCREEN)

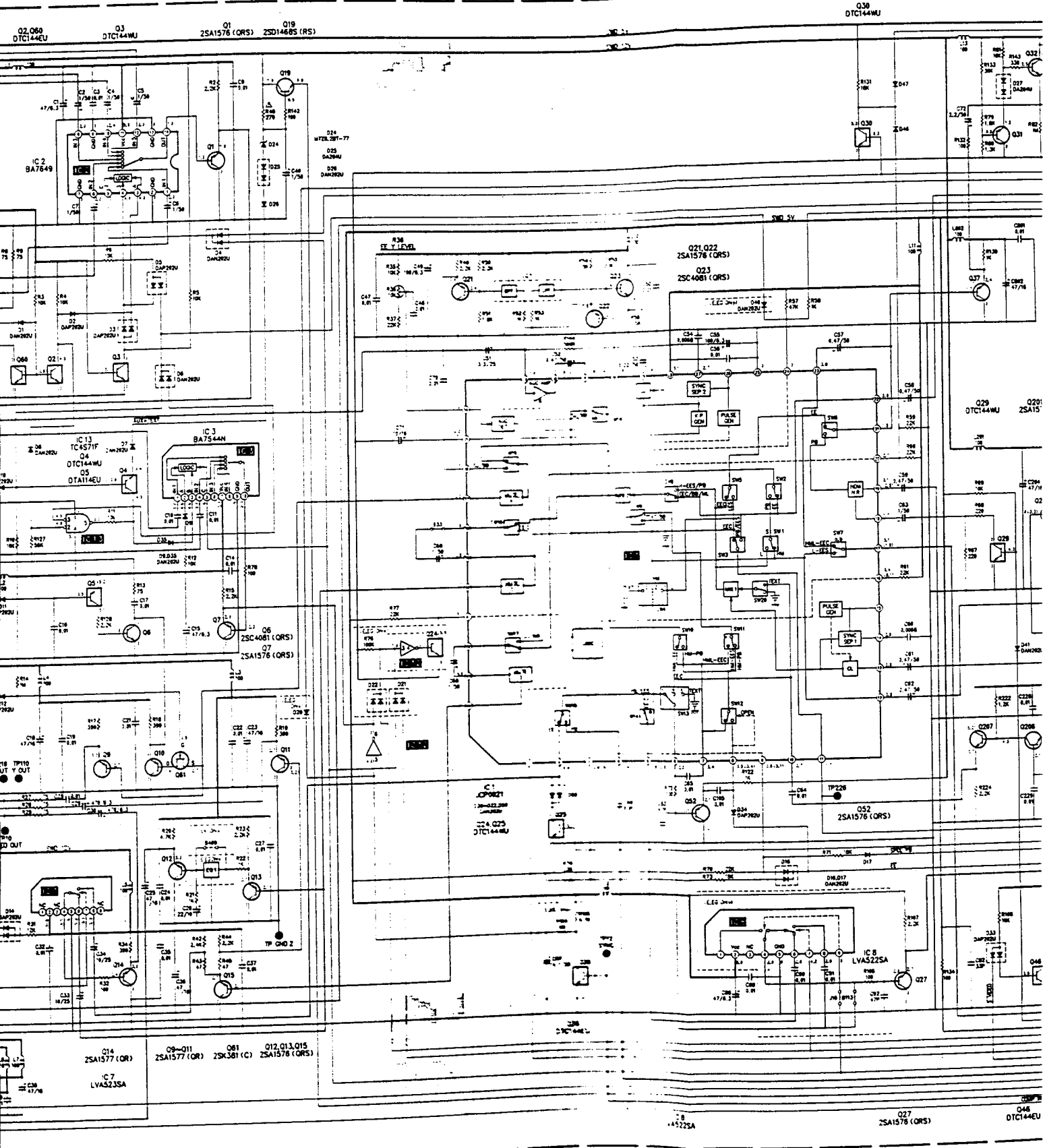


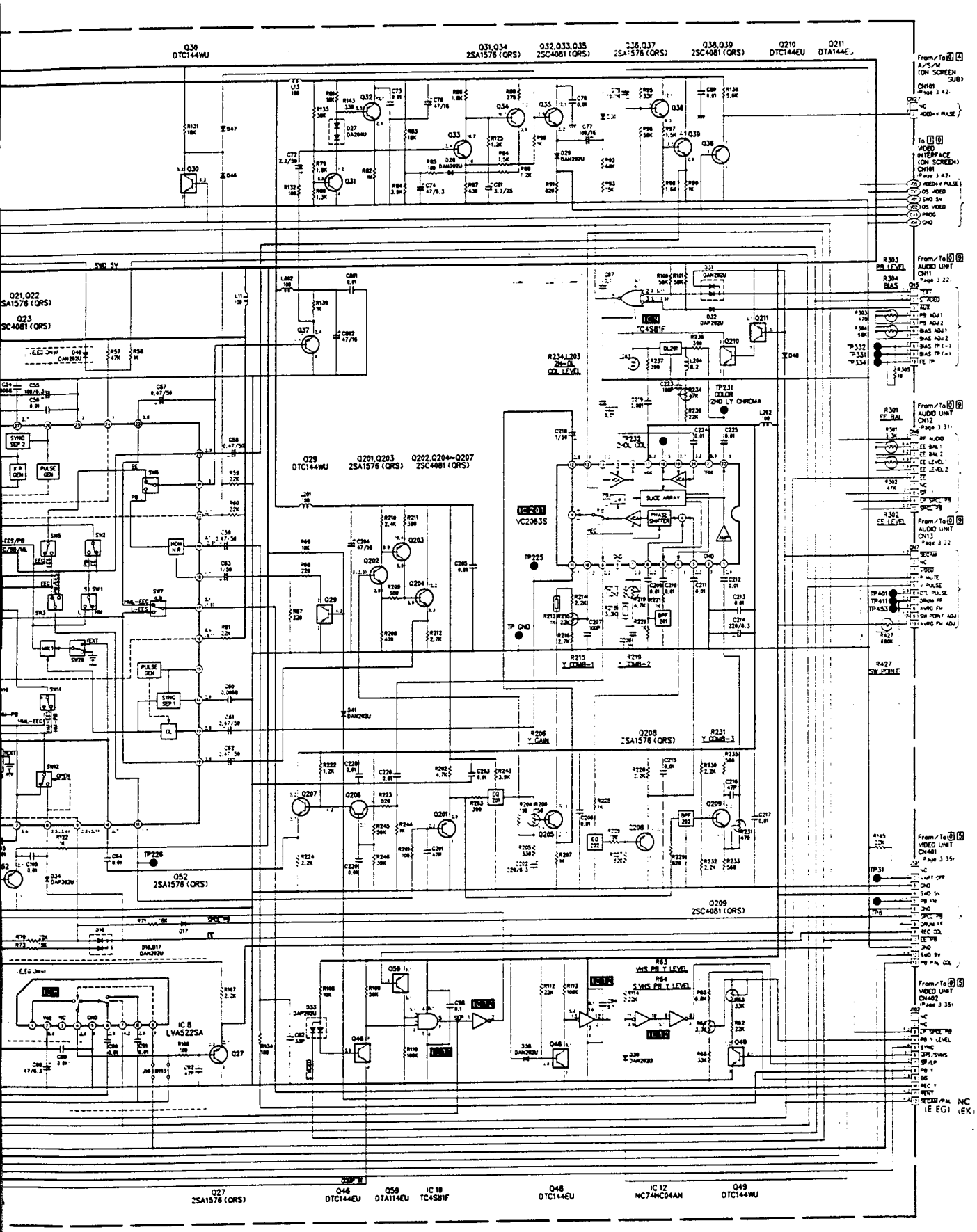

04 A/S/M (ON SCREEN SUB)
From/To 10
VIDEO INTERFACE
CN27
(Page 3-44)
CN101
VIDEO + V PULSE
NC
VIDEO + V PULSE
SWD 5V
V PULSE
GND
CN404-10 (SERVO)
(Page 3-26)
R106 10K
R104 10K
R103 10K
R102 10K
R101 10K
R105 5.6K
D102
D103
C101 100P
D101
Q105
Q104
Q103
Q102
Q101
Q105 2SA933S (RS)
Q104 DTC124ES
Q103 DTC144WS
Q102,Q101 DTC124ES
From/To 10
VIDEO INTERFACE
V05 VIDEO + V PULSE
V01 SWD 5V
DV1 VIDEO OUT
V03 PROG
V02 VIDEO IN
V04 GND
(Page 3-44)
SWD 5V
L901 100
L907 100
C918 0.01
C919 220/6.3
C904 0.01
C903 220/6.3
C905 DOT CLOCK
C905 45P
C906 22P
L902 22
R905 1K
TP901
R903 680
R904 10K
IC 901
M50554-263SP
IC901
Vdd (D)
VERT
HOR
OSC IN
OSC OUT
C SYN
R
G
B
CO
BLNK
YM
CB
RS
Vdd (A)
RS IN
Vss (D)
S-CLK
RESET
OSC 1
OSC 2
PAL
CS
S-DATA
PA OUT
SYEX
Vss (A)
VIDEO OUT
VIDEO IN
LEBK
LECHA
CB IN
R901 4.7K
R902 10K
R906 470
R907 4.7K
From/To 20
TIMER
CN3 (Page 3-72)
CN901
GND
OS CLK
RESET
CS
OS DATA
PROG
D901 DA204U
Q902
Q901
L904 15
L903 8.2
C907 33P
C908 36P
R911 6.2K
R910 2K
*R909
R908 3.6K
R912 12K
C909 0.01
SWD 5V
*R909
7.5K (E/EG)
5.1K (EK)
Q901, Q902
DTA114EU

3.22 VIDEO INTERFACE SCHEMATIC DIAGRAM

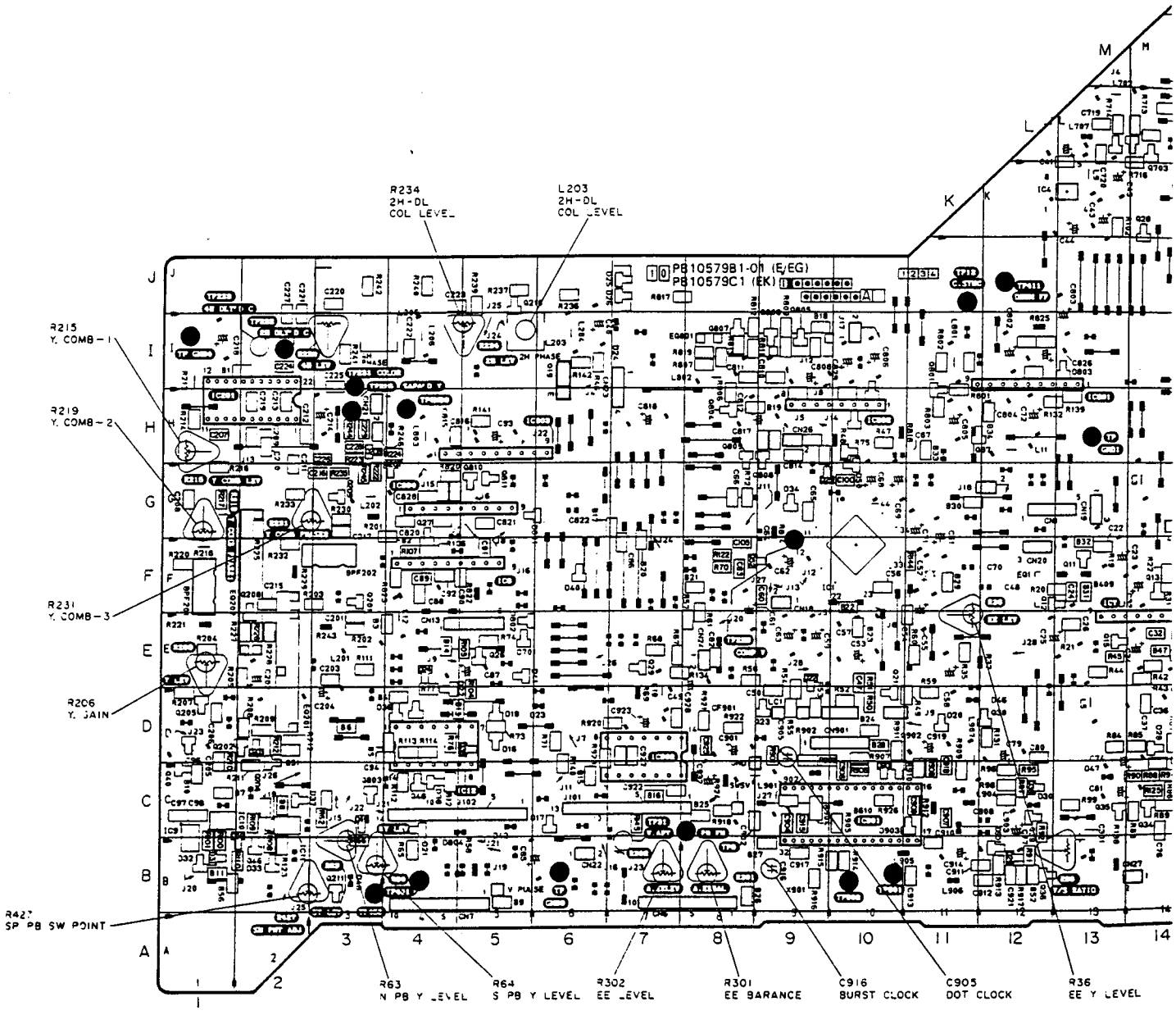


CHEMATIC DIAGRAM




Q30
DTC144WU
Q31,Q34
2SA1576 (QRS)
Q32,Q33,Q35
2SC4081 (QRS)
Q36,Q37
2SA1576 (QRS)
Q38,Q39
2SC4081 (QRS)
Q210
DTC144EU
Q211
DTA144EU
From/To 4
A/S/M
(ON SCREEN SUB)
CN101
To 10
VIDEO INTERFACE
(ON SCREEN)
CN101
5VD 5V
Q21,Q22
2SA1576 (QRS)
Q23
2SC4081 (QRS)
IC4
TC4S81F
R234,L203
2H-DL
CL LEVEL
TP231
COLOR
2HD LY CHROMA
From/To 9
AUDIO UNIT
CN11
R303
PB LEVEL
R304
BIAS
From/To 9
AUDIO UNIT
CN12
R301
EE BAL
From/To 9
AUDIO UNIT
CN13
R302
EE LEVEL
Q29
DTC144WU
Q201,Q203
2SA1576 (QRS)
Q202,Q204–Q207
2SC4081 (QRS)
IC201
VC2363S
SLICE ARRAY
PHASE SHIFTER
TP225
TP GND
R215
Y COMB-1
R219
Y COMB-2
R427
SW POINT
R206
Y GAIN
Q208
2SA1576 (QRS)
R231
Y COMB-3
TP226
Q52
2SA1576 (QRS)
Q209
2SC4081 (QRS)
From/To 5
VIDEO UNIT
CN401
TP31
TP6
R63
VHS PB Y LEVEL
R64
S VHS PB Y LEVEL
IC 8
LVA522SA
Q27
IC10
IC12
Q59
Q46
Q48
Q49
From/To 5
VIDEO UNIT
CN402
NC
(E EG)
Q27
2SA1576 (QRS)
Q46
DTC144EU
Q59
DTA114EU
IC 10
TC4S81F
Q48
DTC144EU
IC 12
NC74HC04AN
Q49
DTC144WU

3.23 VIDEO INTERFACE CIRCUIT BOARD



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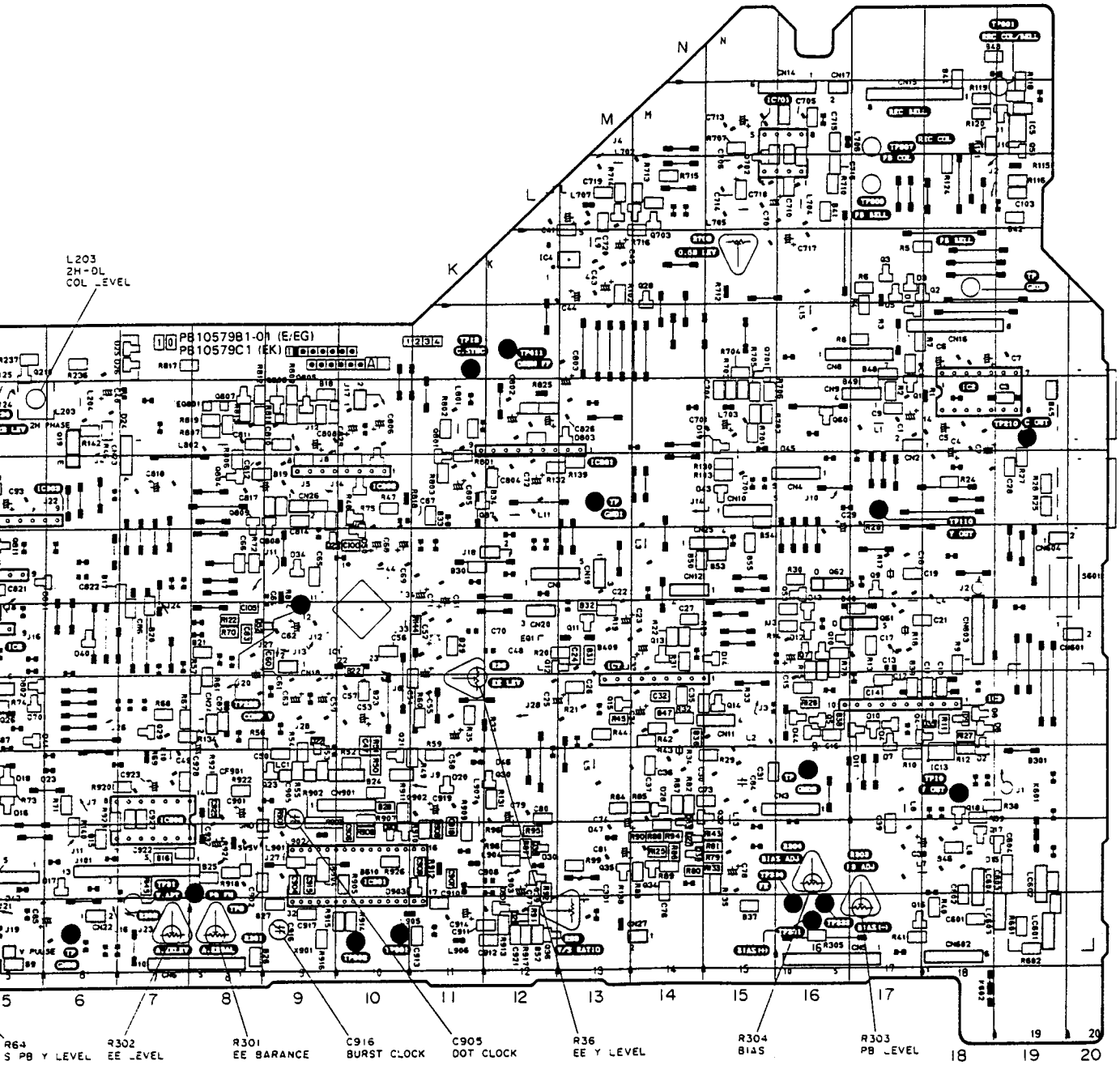

REF No.
TRAN
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Q2
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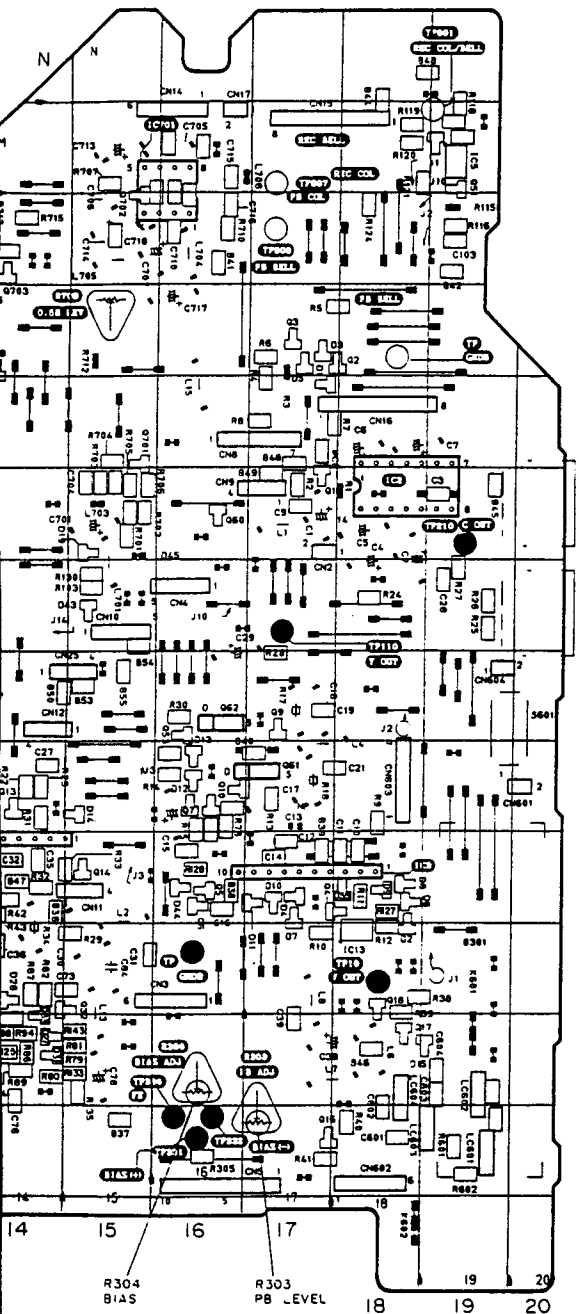

REF No.	LOCATION
TRANSISTOR	
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Q4	E-18
Q5	E-16
Q6	E-16
Q7	F-16
Q8	F-16
Q9	G-17
Q10	F-17
Q11	F-13
Q12	F-13
Q13	F-14
Q14	E-15
Q15	E-14
Q16	B-18
Q17	C-18
Q18	D-18
Q19	H-6
Q20	H-10
Q21	D-10
Q22	E-9
Q23	D-9
Q24	E-4
Q25	G-9
Q26	E-5
Q27	G-4
Q28	K-14
Q29	E-7
Q30	D-12
Q31	C-15
Q32	D-15
Q33	D-14
Q34	C-14
Q35	C-14
Q38	C-12
Q39	C-12
Q46	B-2
Q47	D-4
Q48	C-4
Q49	C-3
Q51	M-19
Q52	F-8
Q53	G-16
Q55	M-19
Q59	C-2
Q60	I-16
Q61	F-17
Q62	G-16
Q201	F-3
Q202	D-2
Q203	D-2
Q204	D-2
Q205	D-1
Q206	H-3
Q207	G-4
Q208	F-2
Q209	G-3
Q701	J-15
Q702	L-15
Q703	L-13
Q704	L-13
Q705	L-13
Q801	H-11
Q802	H-10
Q804	H-8
Q805	I-9
Q806	I-9
Q807	I-8
Q808	H-9
Q809	H-8
Q810	G-5
Q901	C-10
Q902	C-11

REF No.	LOCATION
DIODE	
D1	J-18
D2	D-18
D3	K-17
D4	E-17
D5	K-17
D6	E-19
D7	E-17
D8	E-18
D9	E-18
D10	E-17
D11	E-17
D12	F-16
D13	F-16
D14	F-15
D15	C-19
D16	D-5
D17	C-6
D18	D-5
D19	H-15
D20	D-11
D21	C-4
D22	E-5
D23	D-6
D24	J-7
D25	J-7
D26	J-7
D27	C-15
D28	D-14
D29	C-13
D30	C-14
D31	B-1
D32	B-1
D33	B-2
D34	G-9
D35	E-18
D36	D-4
D37	C-3
D38	C-4
D39	D-5
D40	F-6
D41	E-5
D43	H-15
D44	E-16
D45	H-16
D46	D-11
D47	C-14
D701	E-6
D801	G-6
D802	E-6
D803	I-13
D901	B-12
D903	C-11

REF No.	LOCATION
RESISTOR	
R1	I-18
R2	I-17
R3	J-17
R4	J-17
R5	K-18
R6	K-17
R7	J-18
R8	J-17
R9	F-18
R10	D-18
R11	E-18
R12	D-18
R13	F-17
R14	F-16
R15	F-16
R16	F-16
R17	G-17
R18	F-17
R19	F-13
R20	F-13
R21	E-13
R22	F-14
R23	F-14
R24	H-18
R25	H-19
R26	H-19
R27	H-19
R28	G-17
R29	D-15
R30	G-16
R31	F-14
R32	E-14
R33	E-15
R34	E-14
R35	E-11
R36	E-12
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R40	B-18
R41	B-18
R42	E-14
R43	E-14
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R45	E-14
R46	I-6
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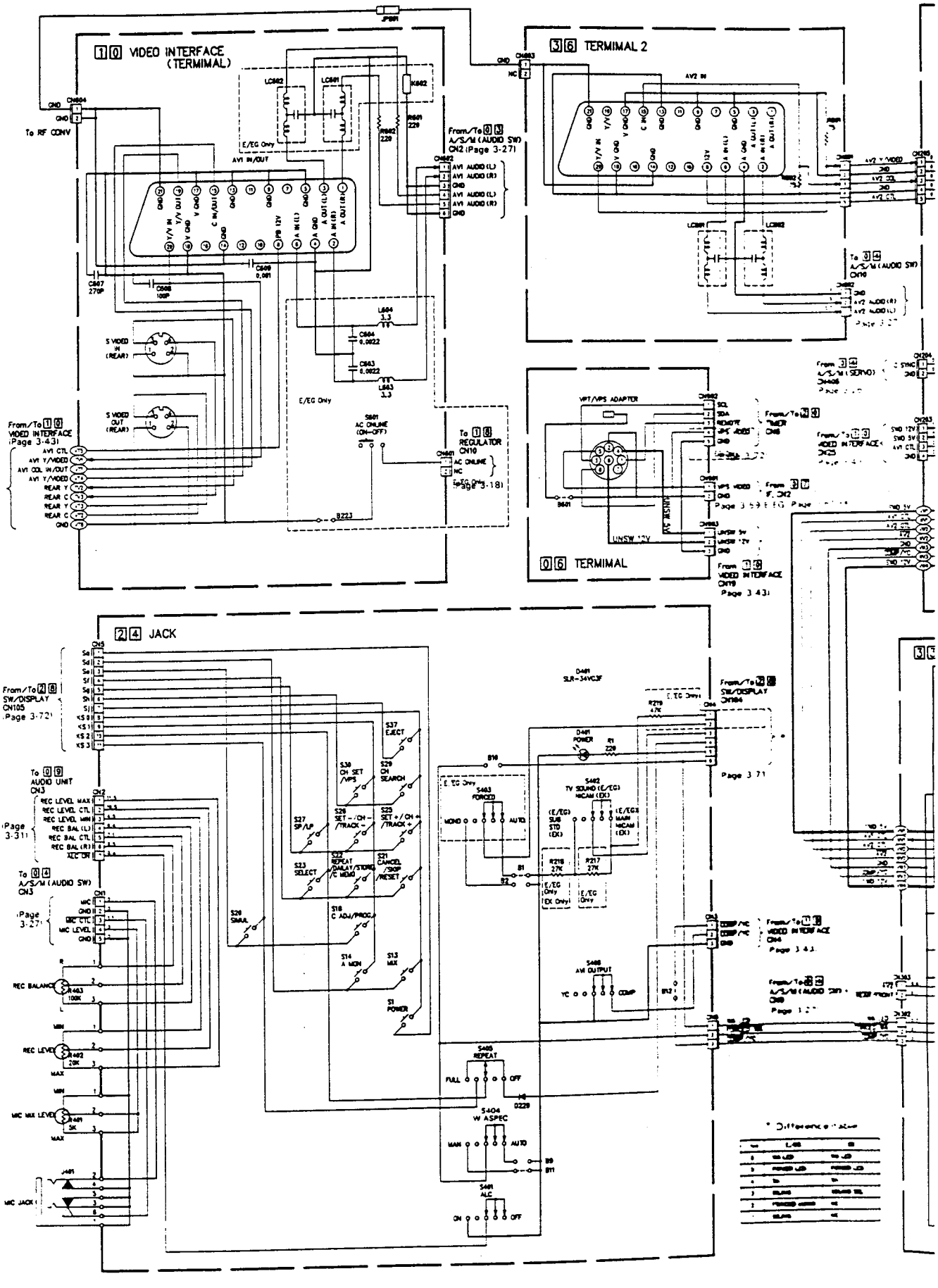
R52	D-10
R53	D-9
R54	D-9
R55	D-9
R56	E-9
R57	E-8
R58	E-7
R59	D-11
R60	E-11
R61	F-8
R62	C-3
R63	B-3
R64	B-3
R65	B-4
R66	C-3
R67	E-8
R68	E-7
R69	D-7
R70	F-8
R71	D-6
R72	F-7
R73	D-5
R74	E-5
R75	G-10
R76	D-5
R77	E-4
R78	F-16
R79	C-15
R80	C-15
R81	C-15
R82	D-14
R83	C-14
R84	D-13
R85	D-14
R86	C-14
R87	D-14
R88	C-14
R89	C-14
R90	C-14
R91	B-13
R92	B-14
R93	B-14
R95	C-12
R96	C-12
R97	C-12
R98	C-12
R99	C-13
R100	C-1
R101	C-1
R102	K-14
R103	H-15
R104	E-5
R105	E-5
R106	F-4
R107	F-4
R108	B-2
R109	C-2
R110	B-2
R111	E-3
R112	C-4
R113	D-4
R114	D-4
R115	L-19
R116	L-19
R117	M-19
R118	M-19
R119	M-18
R120	M-18
R121	M-19
R122	F-8
R123	B-2
R124	L-18
R125	C-14
R126	C-12
R127	E-18
R128	E-16
R129	F-16
R130	H-15

REF No.	LOCATION
RESISTOR	
R131	D-12
R132	H-13
R133	C-15
R134	E-8
R135	C-15
R201	G-3
R202	E-3
R203	F-3
R204	E-1
R205	E-2
R206	E-1
R207	D-1
R208	D-2
R209	D-2
R210	D-2
R211	D-2
R212	D-2
R213	H-1
R214	H-1
R215	H-1
R216	G-1
R217	G-1
R218	F-1
R219	G-1
R220	F-1
R221	E-1
R222	G-4
R223	H-3
R224	H-4
R225	G-2
R226	E-2
R227	E-2
R228	E-2
R229	F-2
R230	G-3
R231	G-2
R232	F-2
R233	G-2
R234	I-5
R235	G-3
R236	J-6
R237	J-5
R238	I-3
R239	J-5
R240	J-4
R241	I-3
R242	J-3
R243	E-3
R244	H-3
R245	G-3
R246	H-4
R301	B-8
R302	B-7
R303	B-17
R304	C-16
R305	B-16
R427	B-2
R472	B-3
R601	B-19
R602	B-19
R701	I-15
R702	I-16
R703	I-15
R704	J-15
R705	I-15
R706	I-16
R707	M-15
R708	M-16
R709	K-15
R710	L-16
R711	L-14
R712	K-15
R713	L-13
R714	L-13
R716	L-12
R801	H-11
R802	I-11
R803	H-11
R804	I-12
R805	I-13
R806	H-8
R807	I-8
R808	I-9
R809	I-9
R810	I-9
R811	I-9
R812	I-9
R813	I-8
R814	F-9
R815	H-9
R816	H-9
R817	J-8
R818	H-11
R819	I-8
R820	G-5
R821	G-4
R901	D-9
R902	D-9
R903	D-10
R904	C-9
R905	C-10
R906	C-10
R907	D-10
R908	C-11
R909	C-11
R910	C-11
R911	D-11
R912	C-11
R913	B-12
R914	B-10
R915	B-10
R916	B-9
R917	B-12
R918	C-8
R920	D-7
R921	D-8
R922	D-8
R923	D-7
R924	C-8
R926	C-10

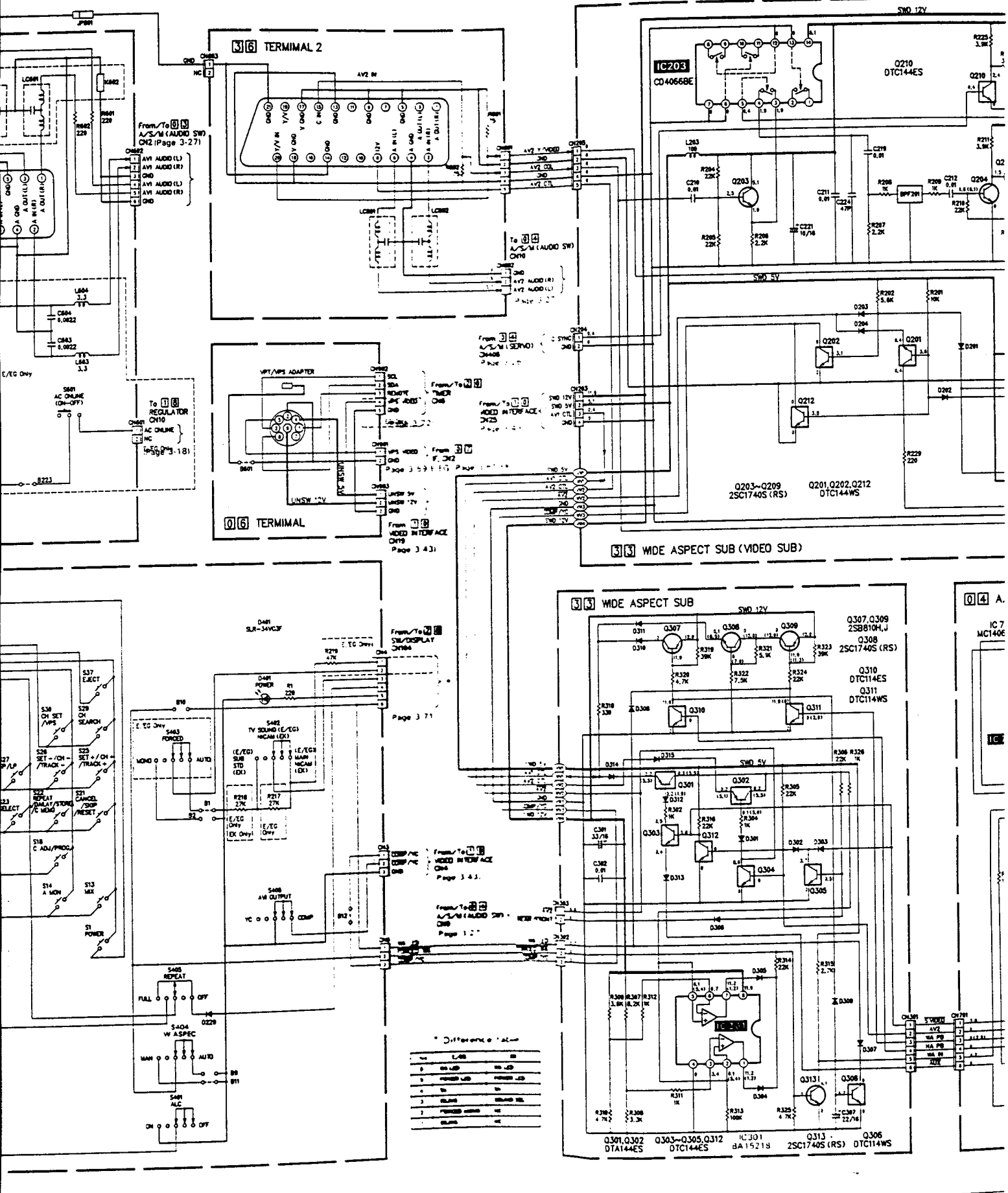
REF No.	LOCATION
CAPACITOR	
C1	I-17
C2	H-19
C3	I-19
C4	H-18
C5	I-18
C6	J-18
C7	J-18
C8	J-17
C9	I-17
C10	E-18
C11	E-18
C12	F-17
C13	F-17
C14	E-17
C15	F-16
C16	E-16
C17	F-17
C18	G-17
C19	G-18
C20	F-17
C21	F-18
C22	F-13
C23	F-14
C24	F-13
C25	E-13
C26	F-13
C27	F-14
C28	H-19
C29	G-17
C30	D-15
C31	D-16
C32	E-14
C33	F-14
C34	E-14
C35	E-14
C36	D-14
C37	D-14
C38	C-18
C39	C-17
C40	J-6
C41	K-13
C42	K-13
C43	K-14
C44	K-13
C45	L-13
C46	H-10
C47	E-10
C48	F-12
C49	E-8
C50	D-9
C51	G-11
C52	F-11
C53	E-10
C54	E-11
C55	E-11
C56	F-10
C57	E-10
C58	E-11
C59	E-9
C60	F-9
C61	E-9
C62	F-9
C63	E-9
C64	F-9
C65	G-9
C66	G-8
C67	H-10
C68	G-10
C69	G-11
C70	F-11
C71	F-11
C72	H-12
C73	D-15
C74	D-13
C75	C-14
C76	C-14
C77	C-14
C78	C-15
C79	D-12
C80	D-12
C81	C-13
C82	E-8
C87	E-5
C88	F-4
C89	F-4
C90	F-5
C91	F-5
C92	F-4
C93	F-4
C94	D-4
C95	M-19
C97	C-1
C98	C-1
C99	C-2
C103	L-19
C105	F-8
C201	E-3
C202	E-2
C203	E-3
C204	D-3
C205	D-2
C206	D-1
C207	H-1
C208	G-1
C209	H-2
C210	H-2
C211	H-2
C212	H-3
C213	H-2
C214	H-3
C215	F-2
C216	G-3
C217	G-3
C218	I-1
C219	H-2
C220	J-3
C221	J-2
C222	I-4
C223	J-5
C224	I-2
C225	I-3
C226	H-3
C227	J-2
C228	H-3
C229	H-3
C601	B-18
C602	C-18
C603	C-19

REF No.	LOCATION
CAPACITOR	
C604	C-19
C605	B-19
C606	C-19
C701	I-15
C702	I-15
C703	I-15
C704	I-15
C705	M-16
C706	M-15
C707	L-16
C708	M-16
C709	L-16
C710	L-16
C711	M-16
C712	M-16
C713	M-15
C714	L-15
C715	M-16
C716	L-16
C717	K-16
C718	L-15
C719	L-14
C720	L-14
C801	I-12
C802	I-12
C803	J-13
C804	H-12
C805	H-11
C806	I-10
C807	H-9
C808	I-9
C809	I-8
C810	I-9
C811	I-9
C812	I-9
C813	H-9
C814	H-9
C815	H-5
C816	H-5
C817	H-9
C818	H-7
C819	G-4
C820	F-4
C821	G-5
C822	G-5
C823	I-9
C824	G-5
C825	I-11
C826	I-12
C901	C-9
C902	C-9
C903	D-9
C904	C-9
C905	C-9
C906	C-10
C907	C-11
C908	C-12
C909	C-11
C910	B-11
C911	B-12
C912	B-12
C913	B-11
C914	B-11
C915	C-9
C916	B-9
C917	B-9
C918	C-11
C919	D-11
C921	B-12
C922	C-9
C923	D-7
C924	D-7
C925	D-8
C927	D-7
C928	D-8
C929	C-9
C932	C-8

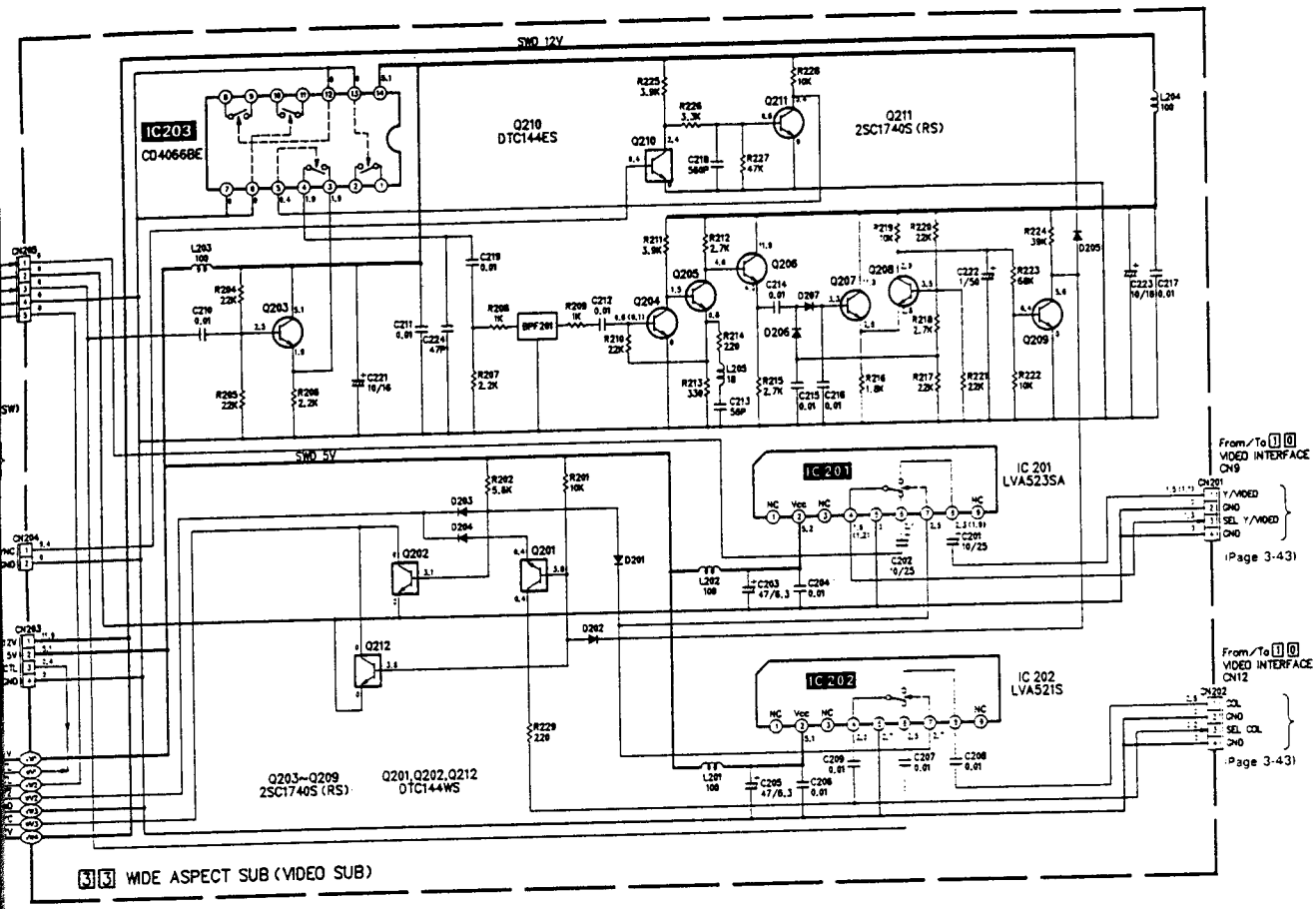
3.24 VIDEO SUB, TERMINAL, TERMINAL 2, VIDEO I (TERMINAL), WIDE ASPECT SUB & JACK SCH

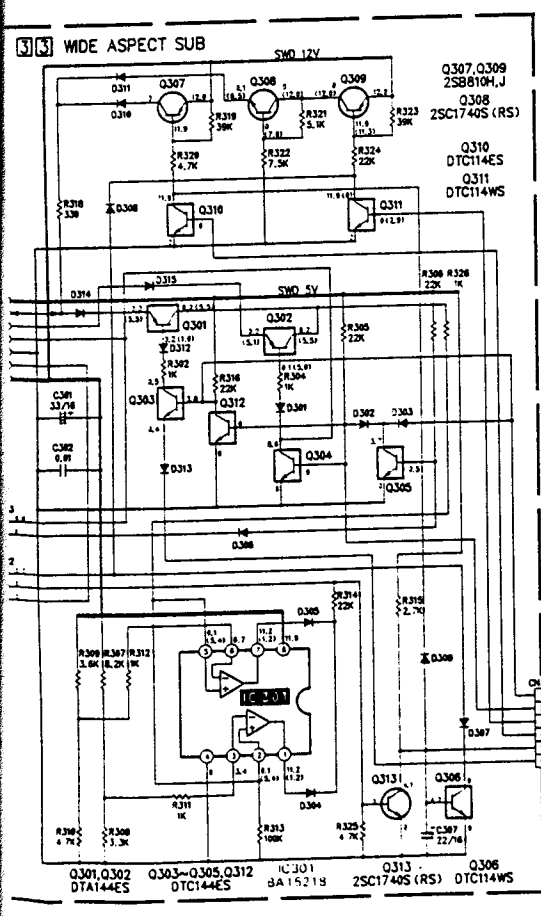


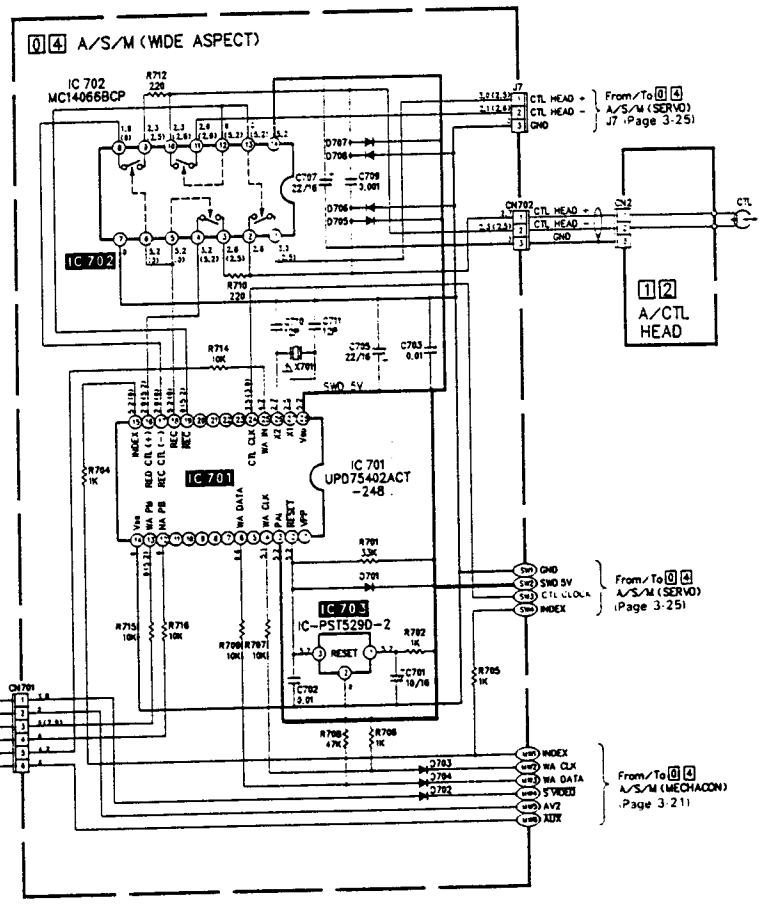
RMINAL 2, VIDEO I (TERMINAL), WIDE ASPECT SUB & JACK SCHEMATIC DIAGRAMS



B | C | D 3-47 3-48 | E

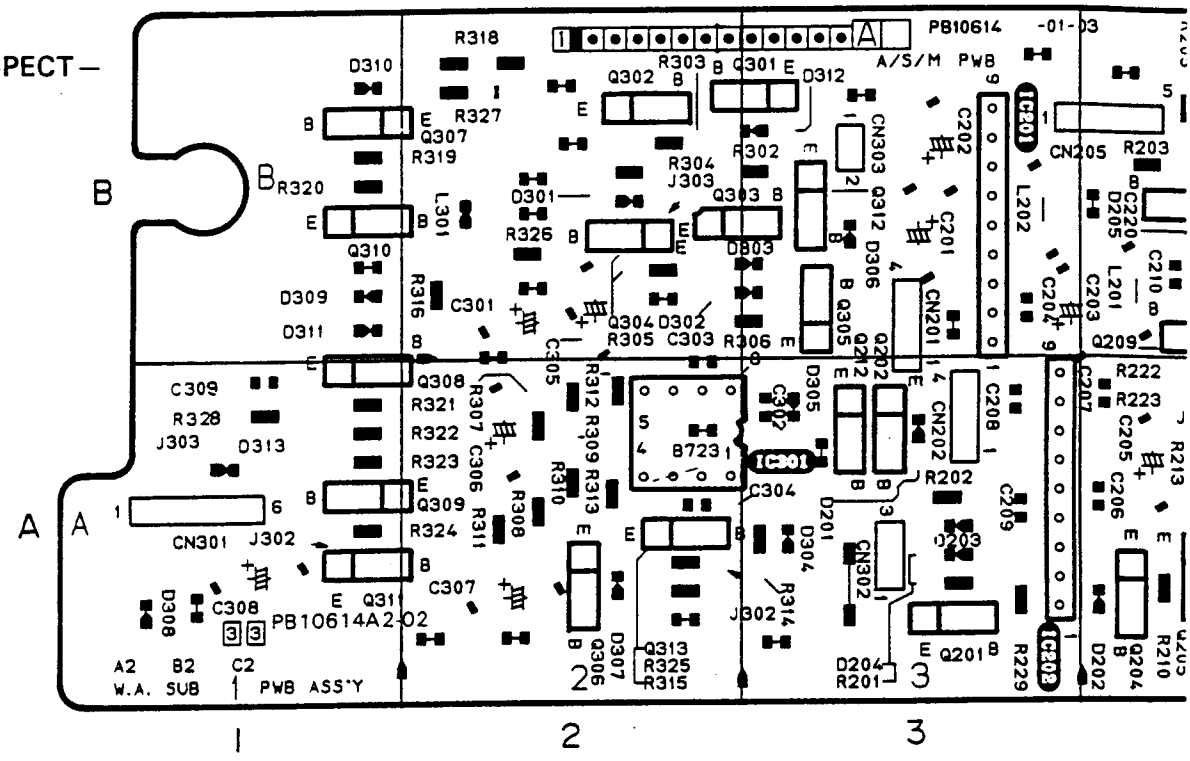

SW0 12V
IC203
CD4066BE
Q210
DTC144ES
Q211
2SC1740S (RS)
SW0 5V
IC 201
LVA523SA
IC 202
LVA521S
From/To 10
VIDEO INTERFACE
CN9
(Page 3-43)
From/To 10
VIDEO INTERFACE
CN12
(Page 3-43)
Q203~Q209
2SC1740S (RS)
Q201,Q202,Q212
DTC144WS
33 WIDE ASPECT SUB (VIDEO SUB)


33 WIDE ASPECT SUB
SW0 12V
Q307,Q309
2SB810H,J
Q308
2SC1740S (RS)
Q310
DTC114ES
Q311
DTC114WS
SW0 5V
IC 301
BA15218
Q301,Q302
DTA144ES
Q303~Q305,Q312
DTC144ES
Q313
2SC1740S (RS)
Q306
DTC114WS

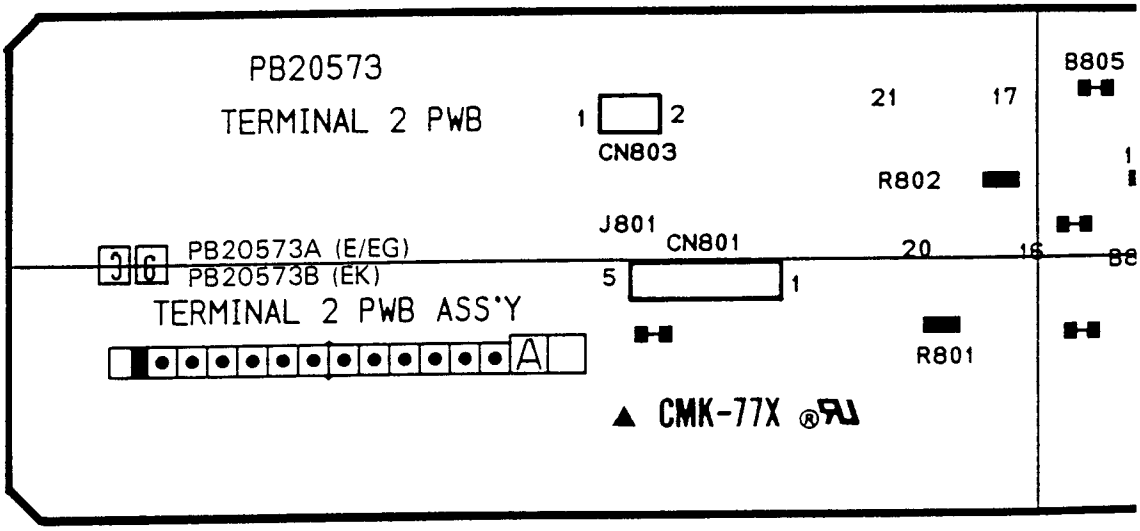

04 A/S/M (WIDE ASPECT)
IC 702
MC14066BCP
IC 701
UPD75402ACT
-248
IC 703
IC-PST529D-2
From/To 04
A/S/M (SERVO)
J7 (Page 3-25)
12
A/CTL
HEAD
From/To 04
A/S/M (SERVO)
(Page 3-25)
From/To 04
A/S/M (MECHACON)
(Page 3-21)

3.25 WIDE ASPECT, TERMINAL, TERMINAL 2 & JACK CIRCUIT BOARDS

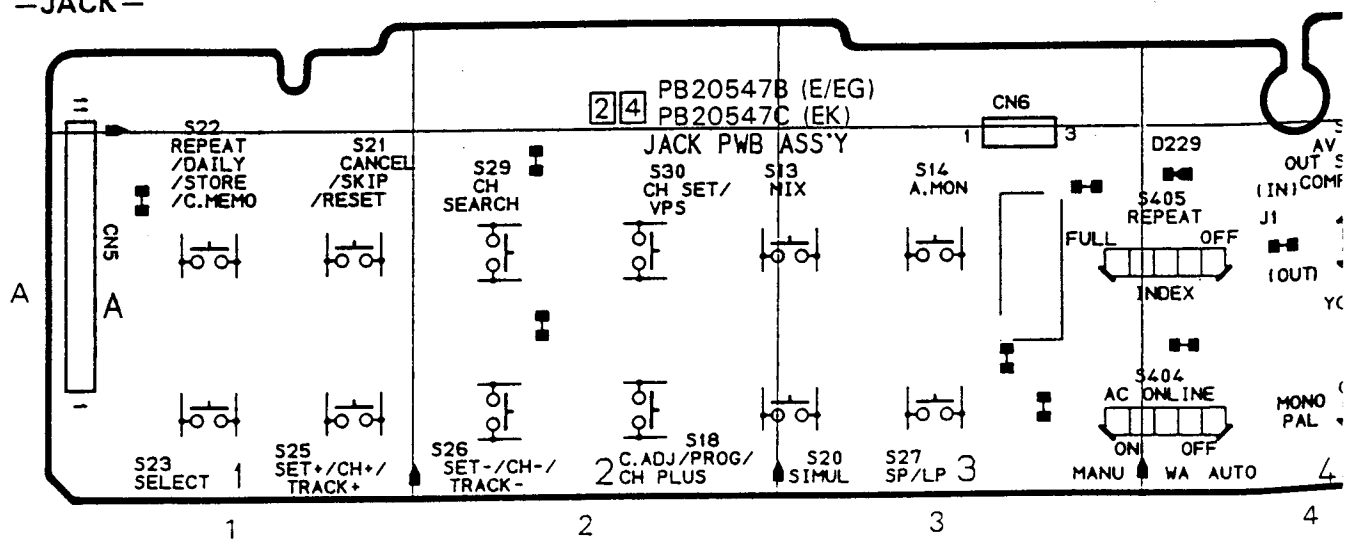
—WIDE ASPECT—



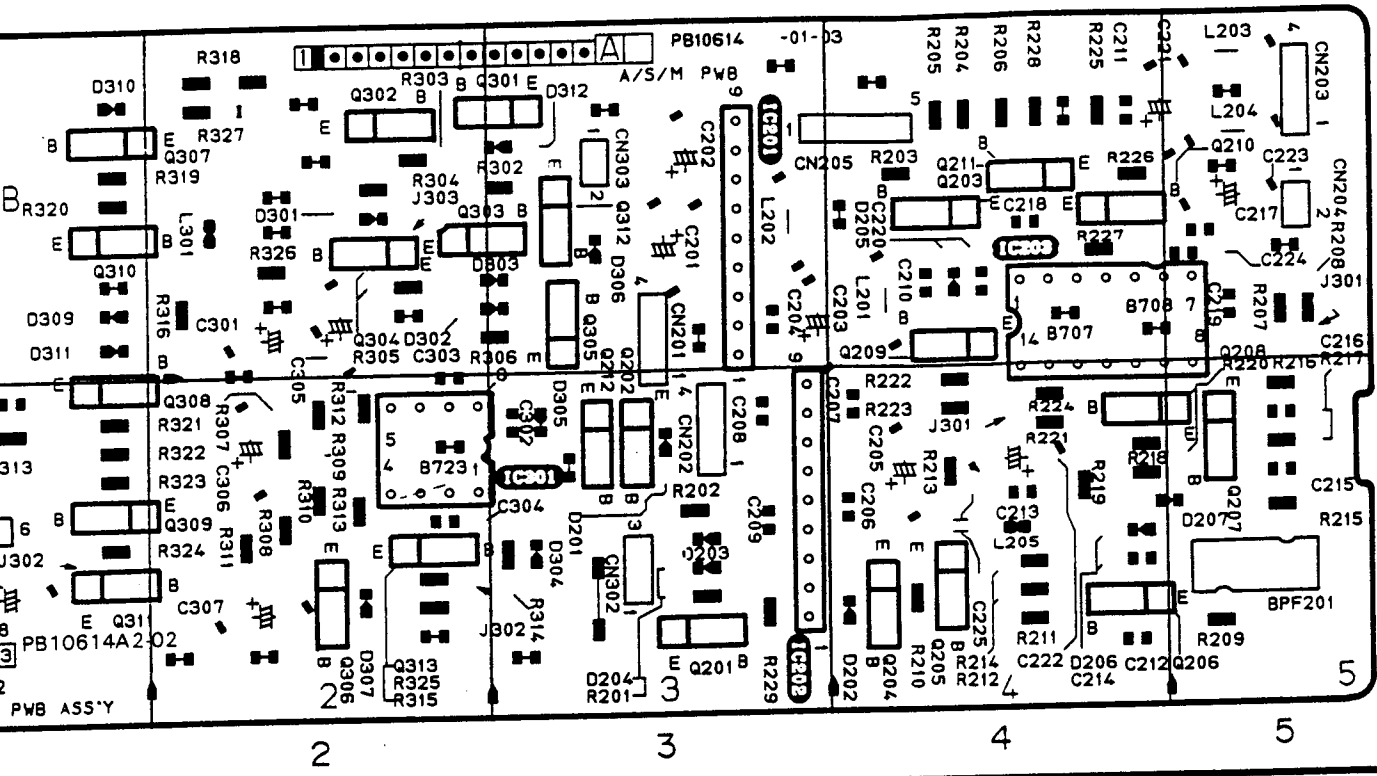
—TERMINAL 2—

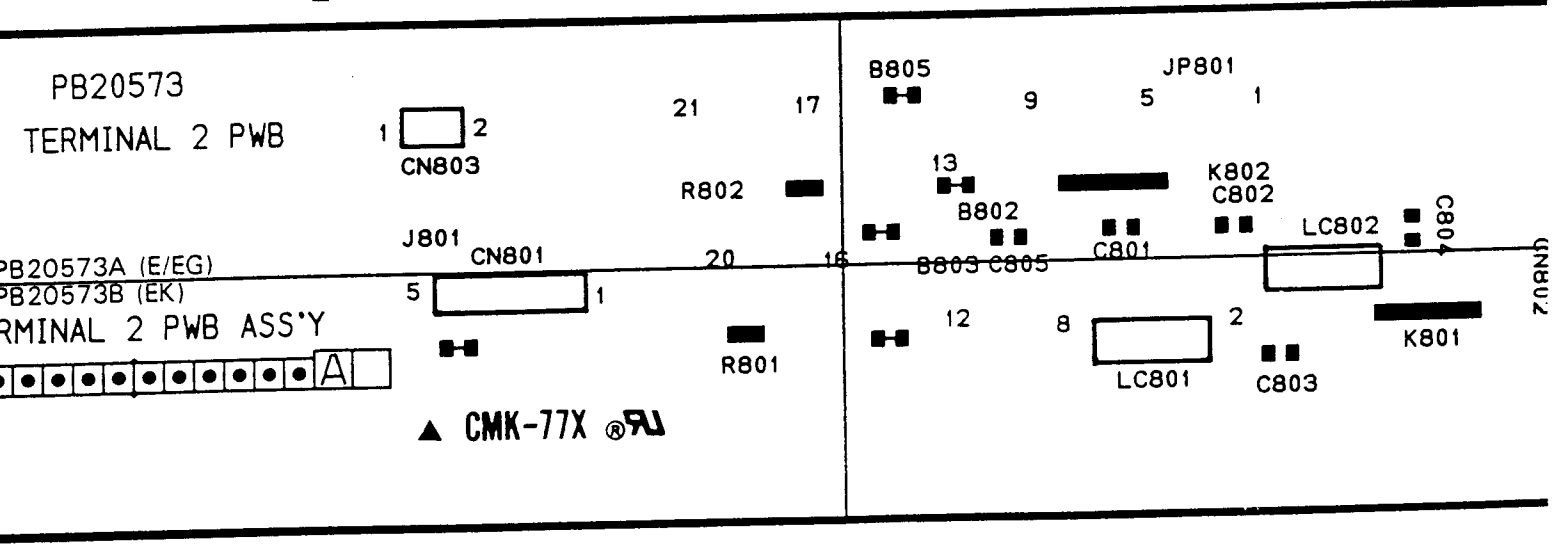


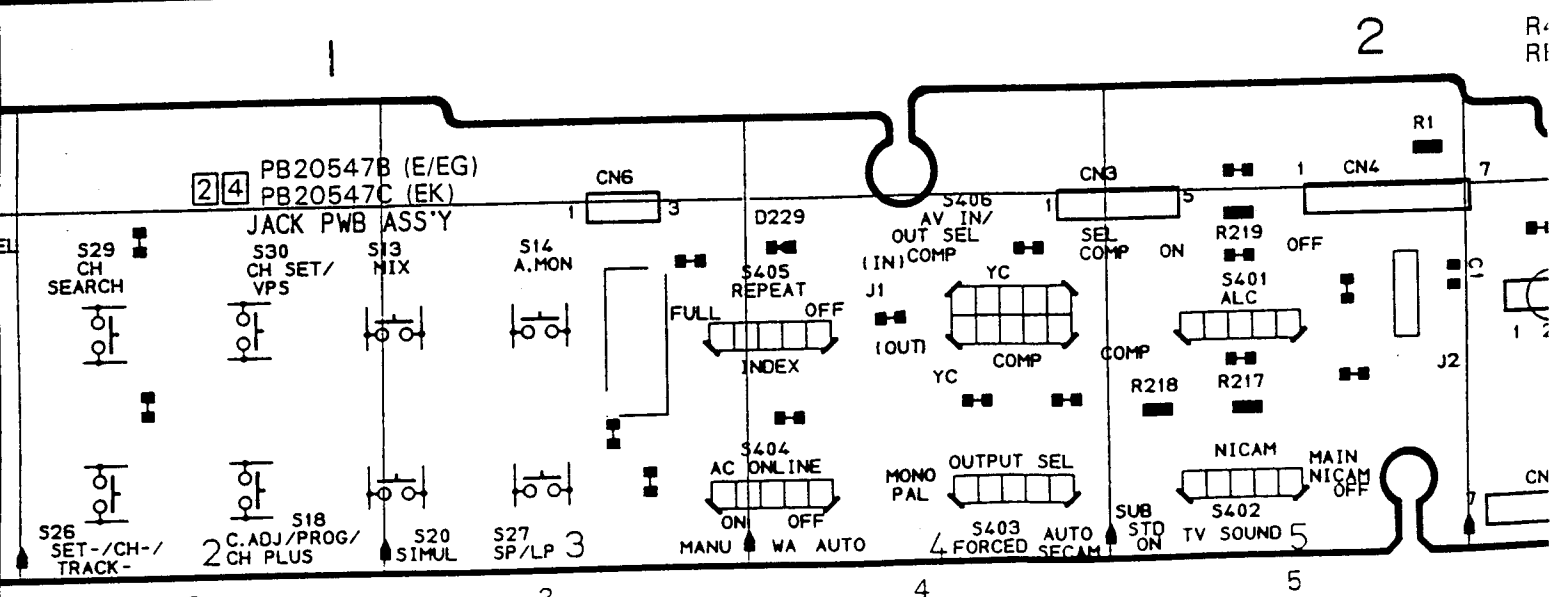
—JACK—

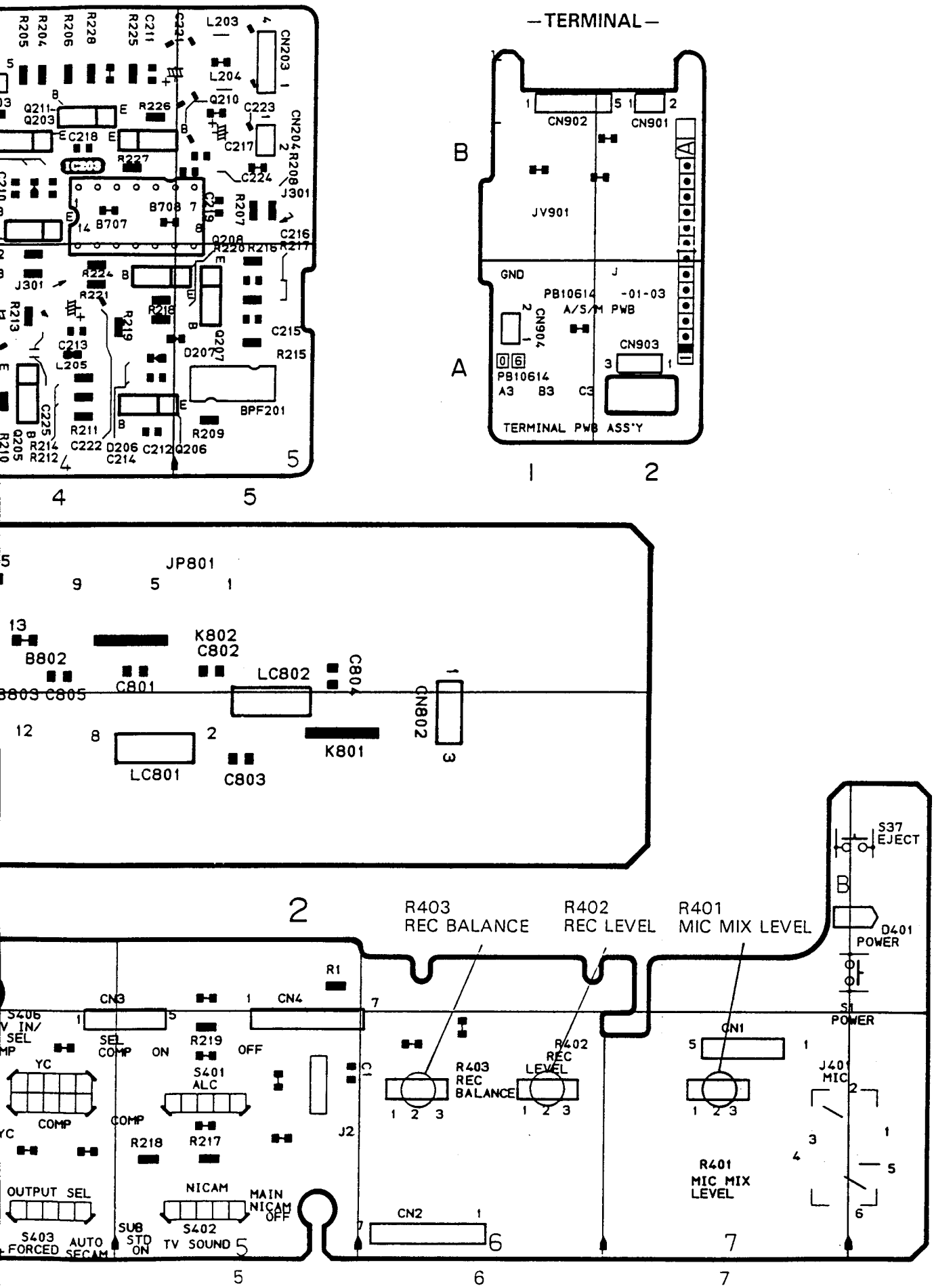


L, TERMINAL 2 & JACK CIRCUIT BOARDS

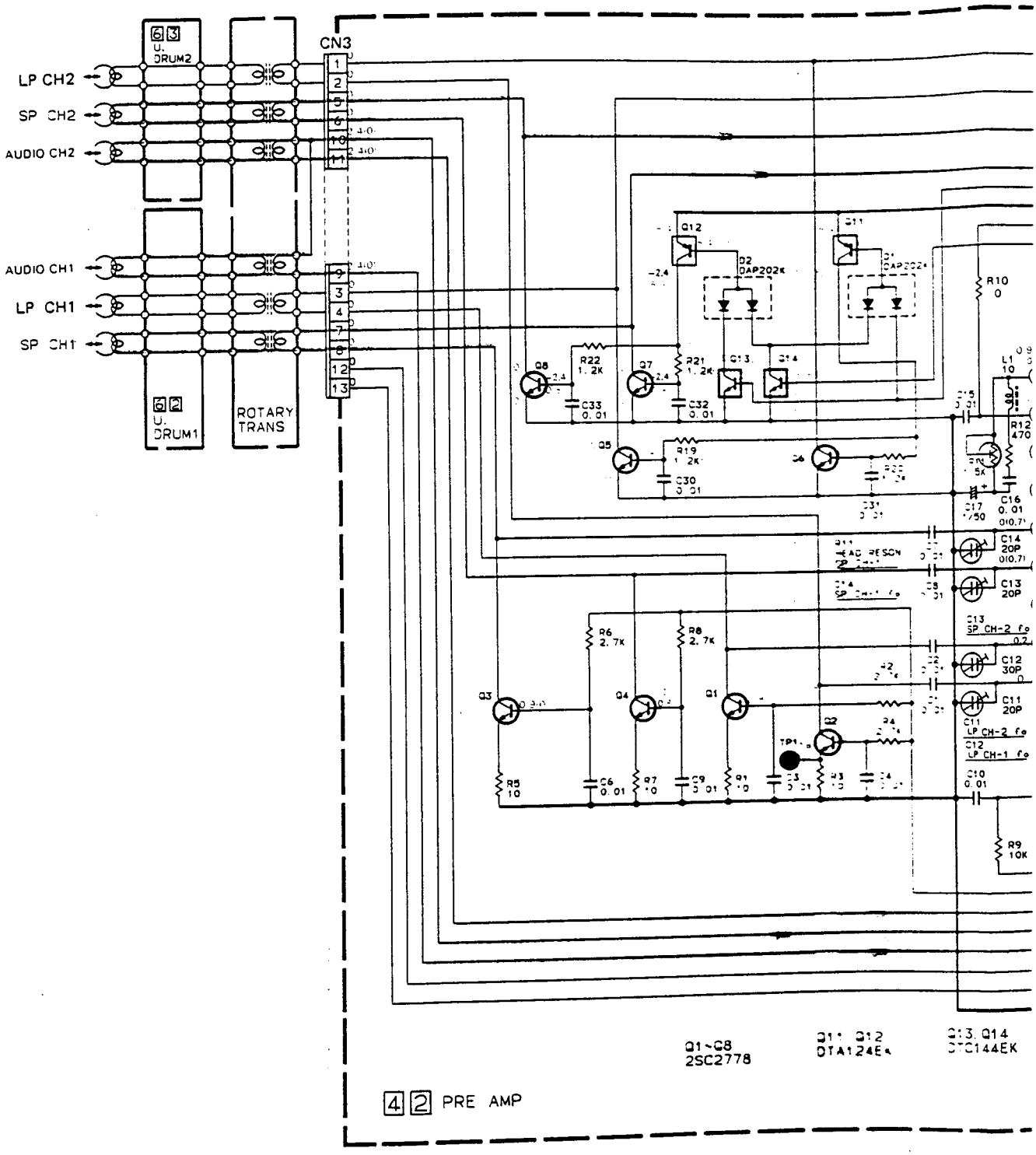


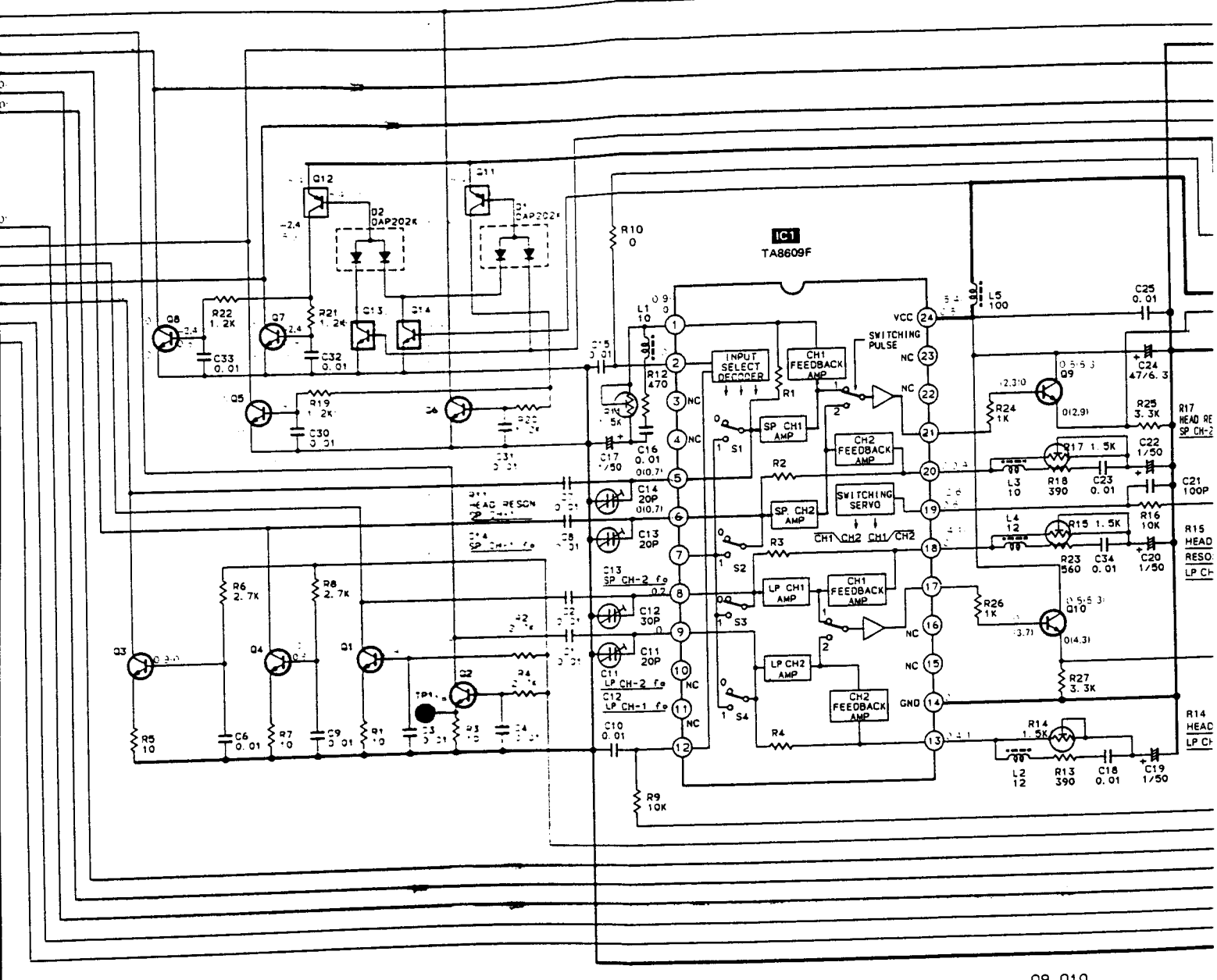




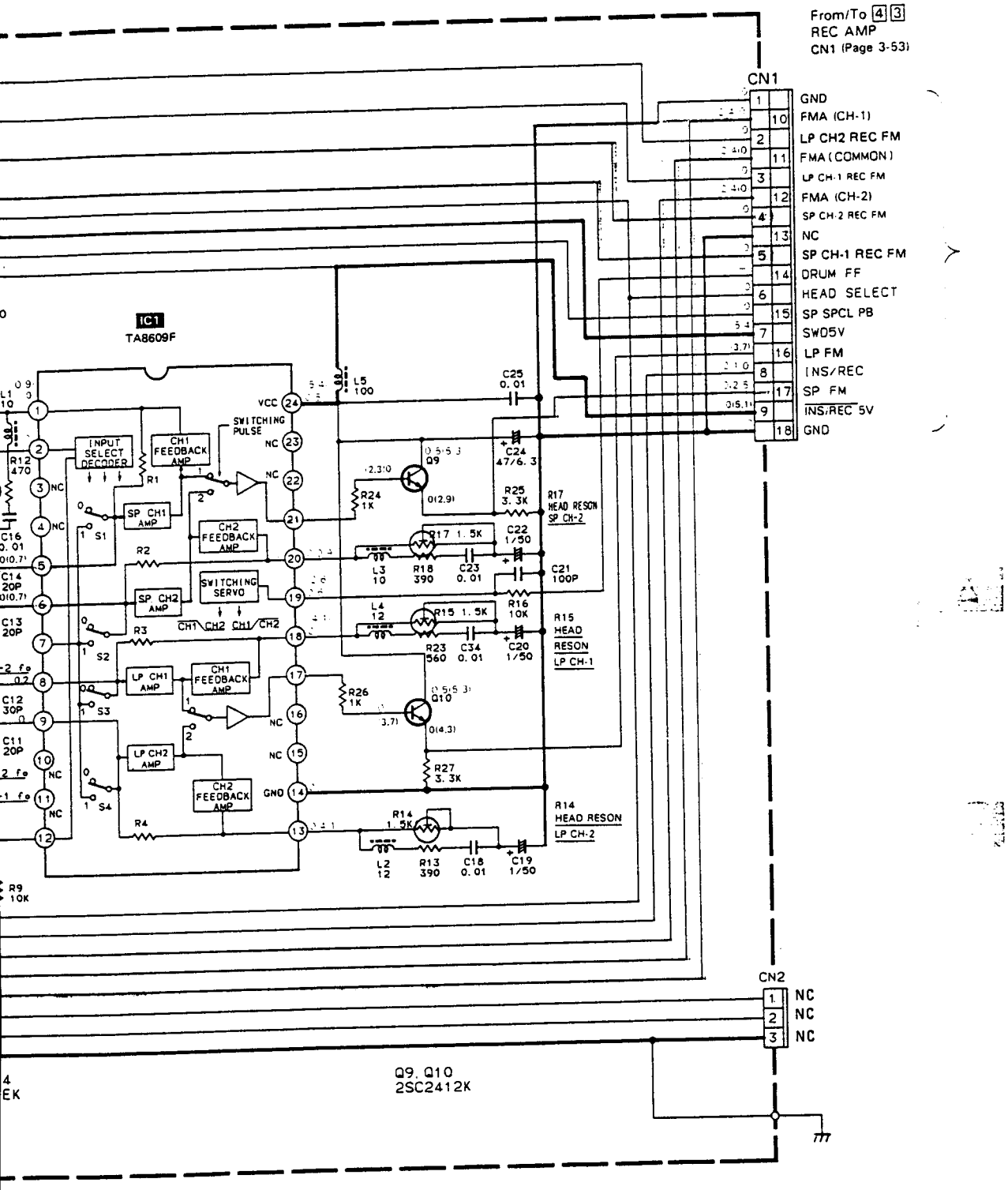

—TERMINAL—
CN902
CN901
JV901
GND
PB10614 -01-03
A/S/M PWB
CN904
CN903
PB10614
A3 B3 C3
TERMINAL PWB ASS'Y
L203
L204
Q210
C223
C217
C224
R226
R227
C218
J301
B708
B707
R207
C216
R217
R220
R216
Q208
R224
R221
R218
R219
C213
L205
C215
R215
D207
Q207
BPF201
C225
R211
C222
D206
C214
C212
Q206
R209
R214
R212
JP801
K802
C802
B802
C801
LC802
C804
C805
CN802
K801
LC801
C803
R403
REC BALANCE
R402
REC LEVEL
R401
MIC MIX LEVEL
S37
EJECT
D401
POWER
S1
POWER
CN3
CN4
R1
S406
V IN/
SEL
SEL
COMP
ON
OFF
R219
S401
ALC
YC
COMP
R218
R217
J2
CN1
J401
MIC
R401
MIC MIX
LEVEL
OUTPUT SEL
S403
FORCED
AUTO
SECAM
NICAM
SUB
STD
ON
S402
TV SOUND
MAIN
NICAM
OFF
CN2

3.26 PRE AMP SCHEMATIC DIAGRAM

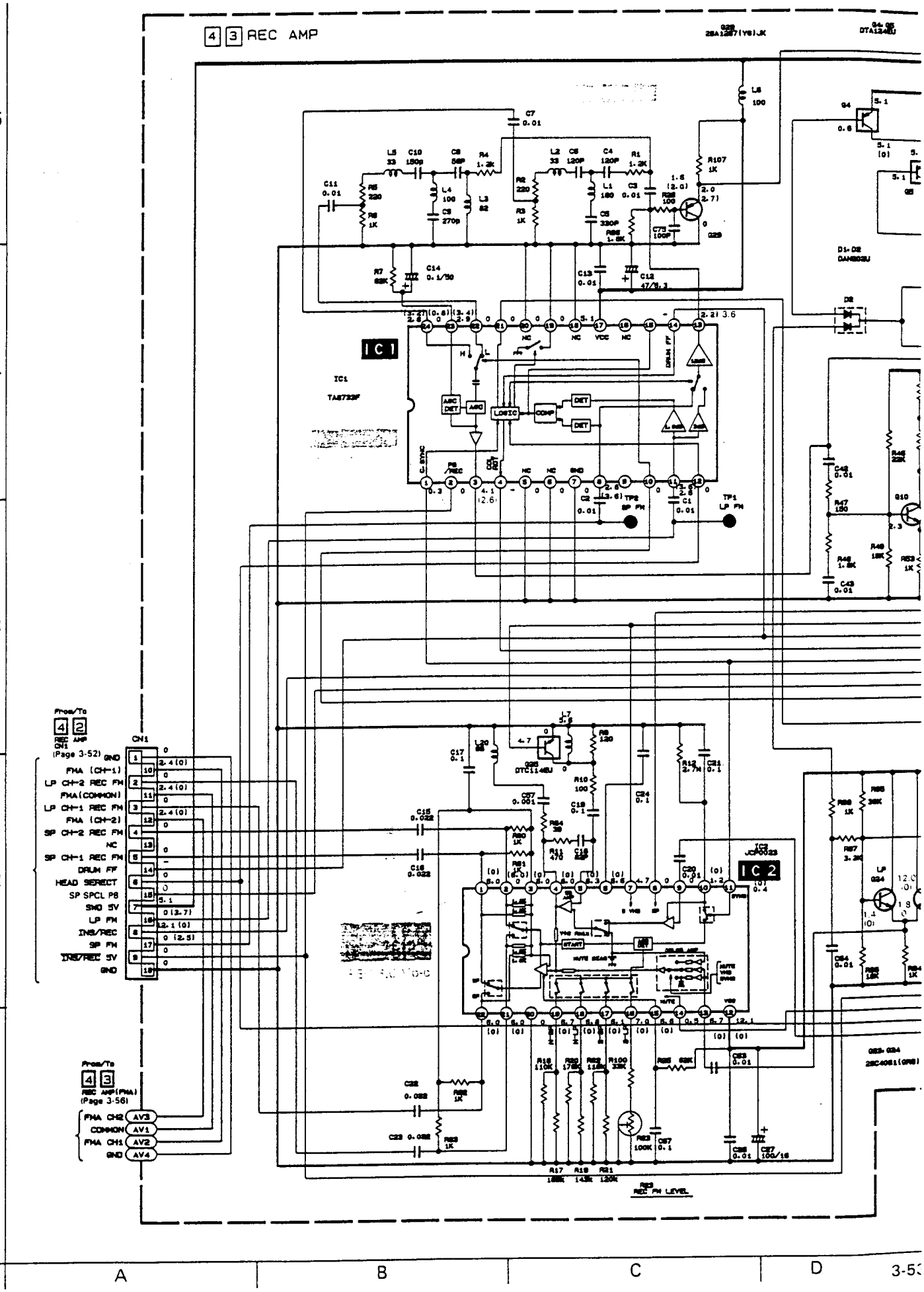



IC1
TA8609F
INPUT SELECT DECODER
CH1 FEEDBACK AMP
SP CH1 AMP
CH2 FEEDBACK AMP
SP CH2 AMP
SWITCHING SERVO
SWITCHING PULSE
LP CH1 AMP
LP CH2 AMP
VCC
GND
NC
S1
S2
S3
S4
CH1 CH2 CH1/CH2
Q1~Q8
2SC2778
Q11, Q12
DTA124EK
Q13, Q14
DTC144EK
Q9, Q10
2SC2412K

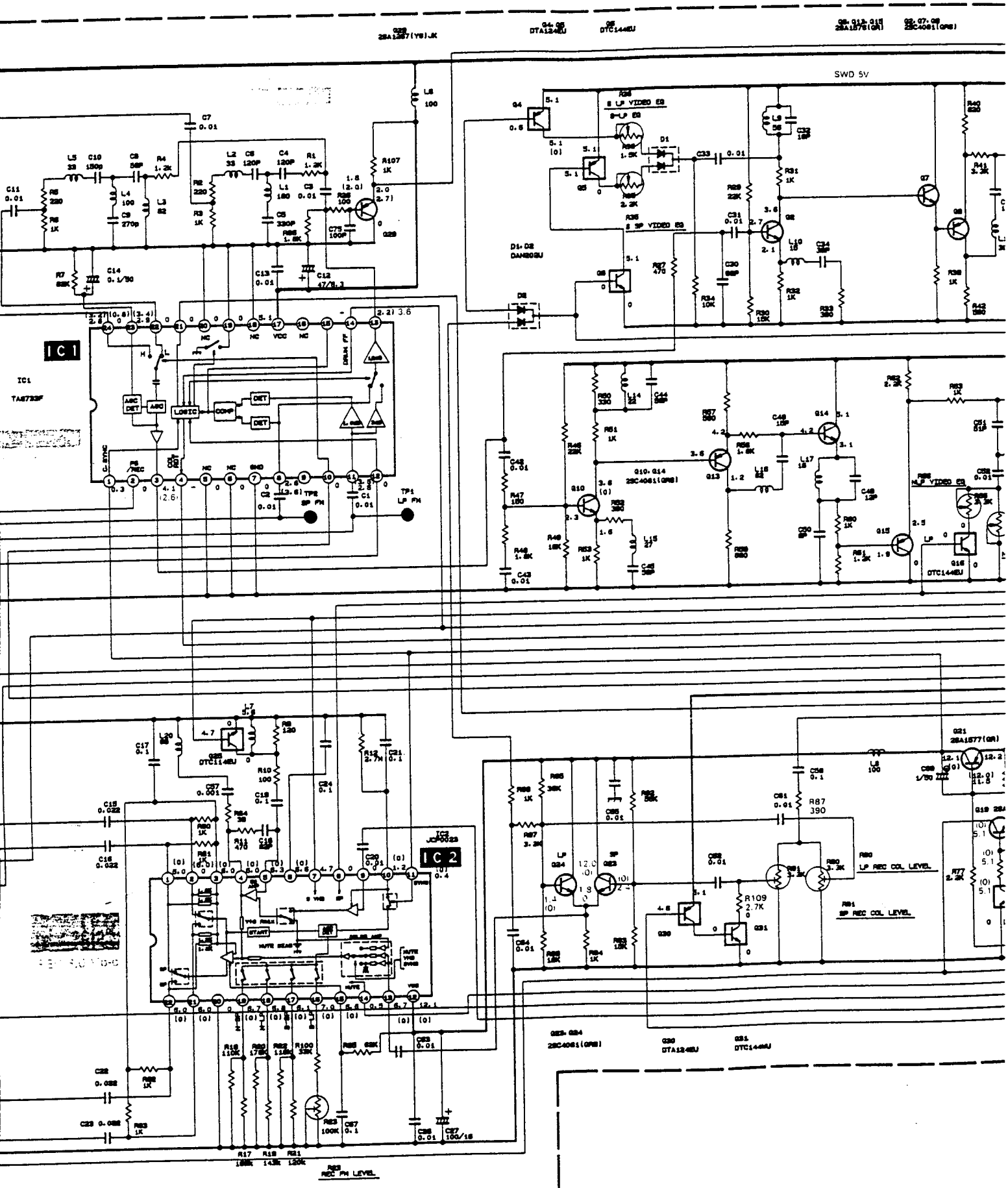
4 2 PRE AMP

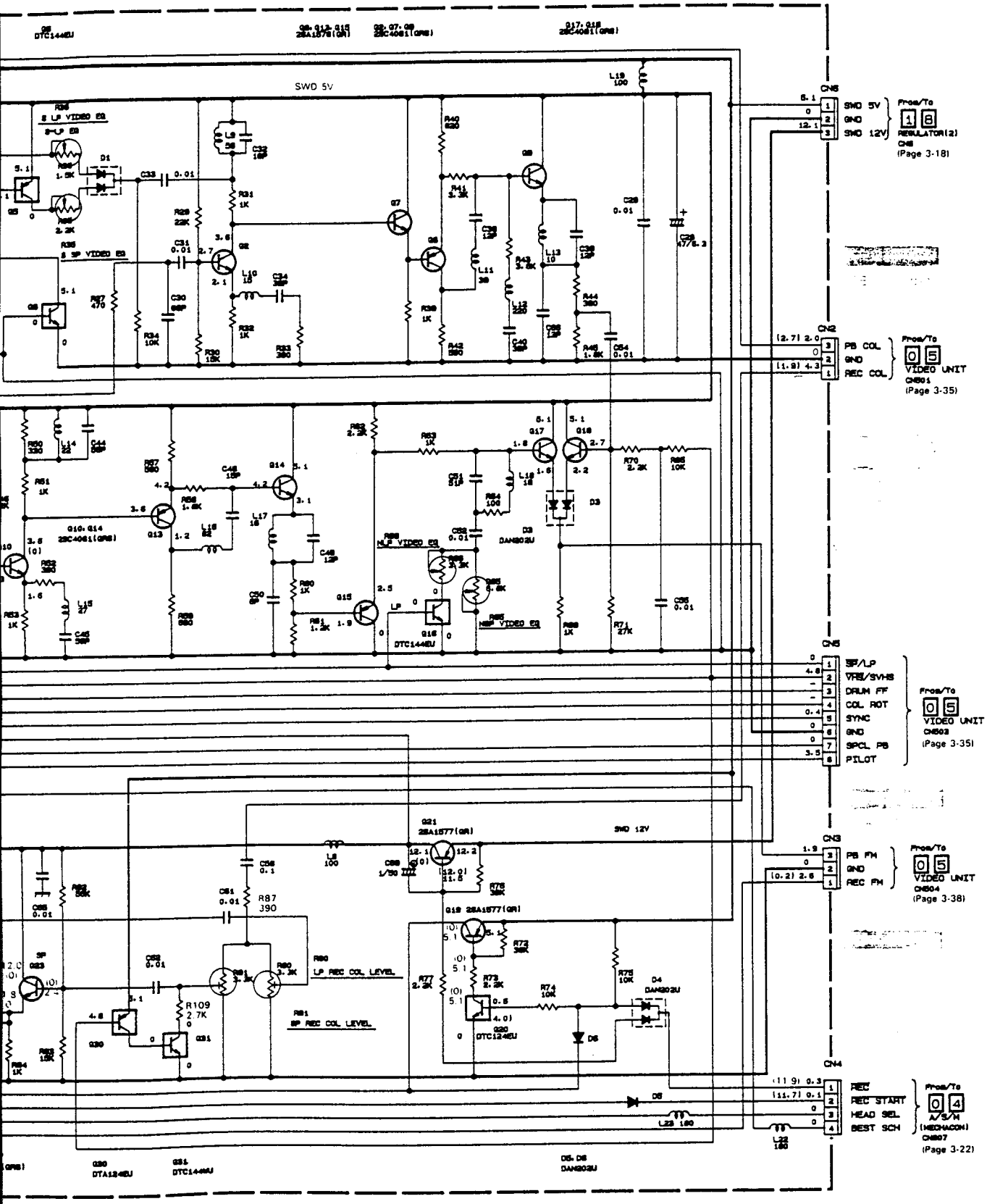

From/To 4 3
REC AMP
CN1 (Page 3-53)
CN1
1 GND
10 FMA (CH-1)
2 LP CH2 REC FM
11 FMA (COMMON)
3 LP CH-1 REC FM
12 FMA (CH-2)
SP CH-2 REC FM
13 NC
5 SP CH-1 REC FM
14 DRUM FF
6 HEAD SELECT
15 SP SPCL PB
7 SWD5V
16 LP FM
8 INS/REC
17 SP FM
9 INS/REC 5V
18 GND
IC1
TA8609F
INPUT SELECT DECODER
CH1 FEEDBACK AMP
SWITCHING PULSE
SP CH1 AMP
CH2 FEEDBACK AMP
SP CH2 AMP
SWITCHING SERVO
CH1 CH2 CH1/CH2
LP CH1 AMP
CH1 FEEDBACK AMP
LP CH2 AMP
CH2 FEEDBACK AMP
VCC
GND
NC
L5 100
C25 0.01
C24 47/6.3
Q9
R24 1K
R25 3.3K
R17 HEAD RESON SP CH-2
R17 1.5K
L3 10
R18 390
C23 0.01
C22 1/50
C21 100P
R16 10K
L4 12
R15 1.5K
R23 560
C34 0.01
C20 1/50
R15 HEAD RESON LP CH-1
Q10
R26 1K
R27 3.3K
R14 1.5K
L2 12
R13 390
C18 0.01
C19 1/50
R14 HEAD RESON LP CH-2
R1
R2
R3
R4
S1
S2
S3
S4
R12 470
C16 0.01
C14 20P
C13 20P
C12 30P
C11 20P
R9 10K
CN2
1 NC
2 NC
3 NC
Q9, Q10
2SC2412K

3.27 REC AMP SCHEMATIC DIAGRAM

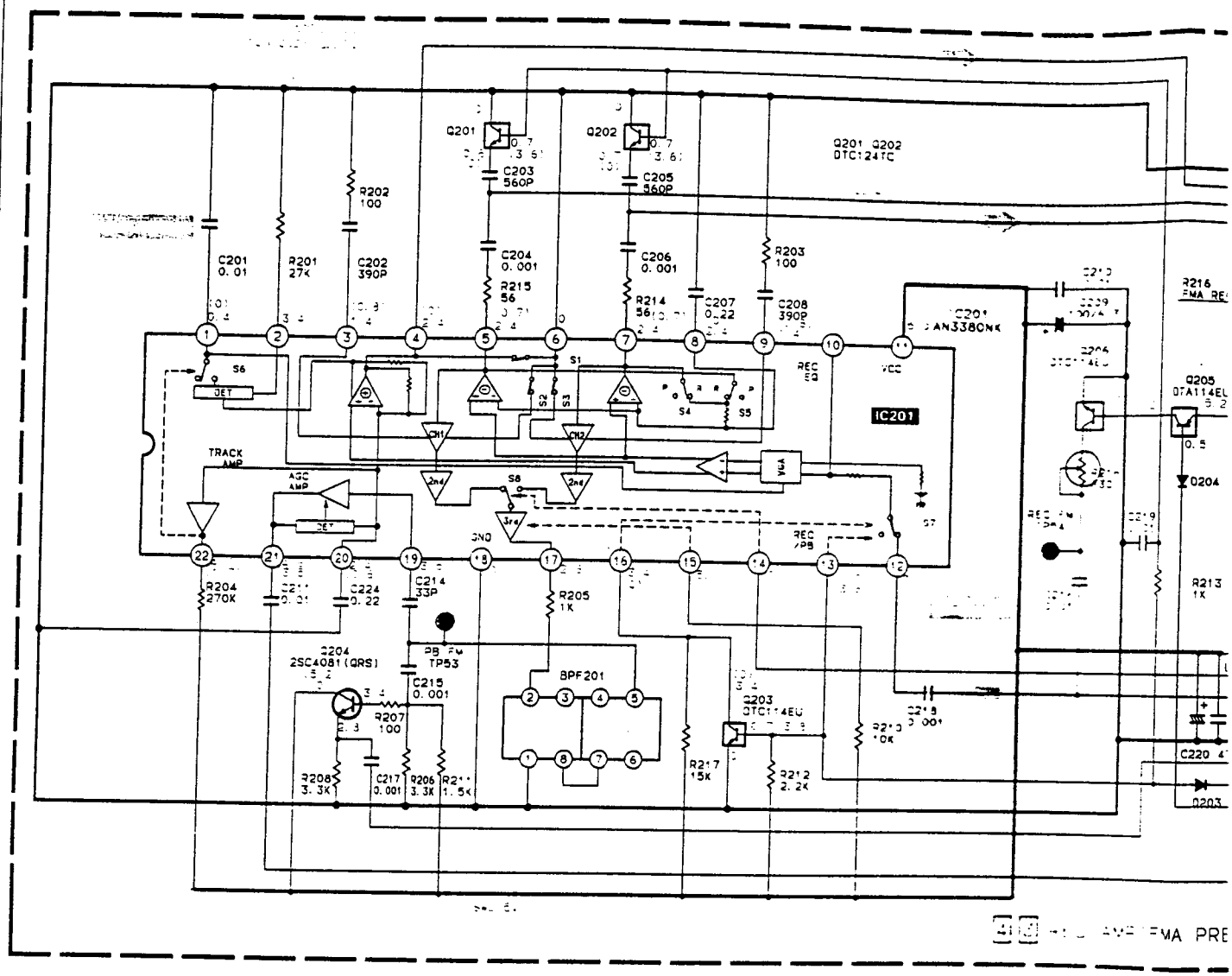


GRAM


IC1
TA8733F
IC2
SWD 5V
LP REC COL LEVEL
SP REC COL LEVEL
REC FM LEVEL


SWD 5V
SWD 12V
CN6
SWD 5V
GND
SWD 12V
REGULATOR(2)
CN8
(Page 3-18)
CN2
PB COL
GND
REC COL
VIDEO UNIT
CN601
(Page 3-35)
CN5
SP/LP
VRS/SVHS
DRUM FF
COL ROT
SYNC
GND
SPCL PB
PILOT
VIDEO UNIT
CN603
(Page 3-35)
CN3
PB FM
GND
REC FM
VIDEO UNIT
CN604
(Page 3-38)
CN4
REC
REC START
HEAD SEL
BEST SCN
A/S/M
(MECHACON)
CN607
(Page 3-22)
LP REC COL LEVEL
SP REC COL LEVEL

3.28 FMA/REC AMP SCHEMATIC DIAGRAM

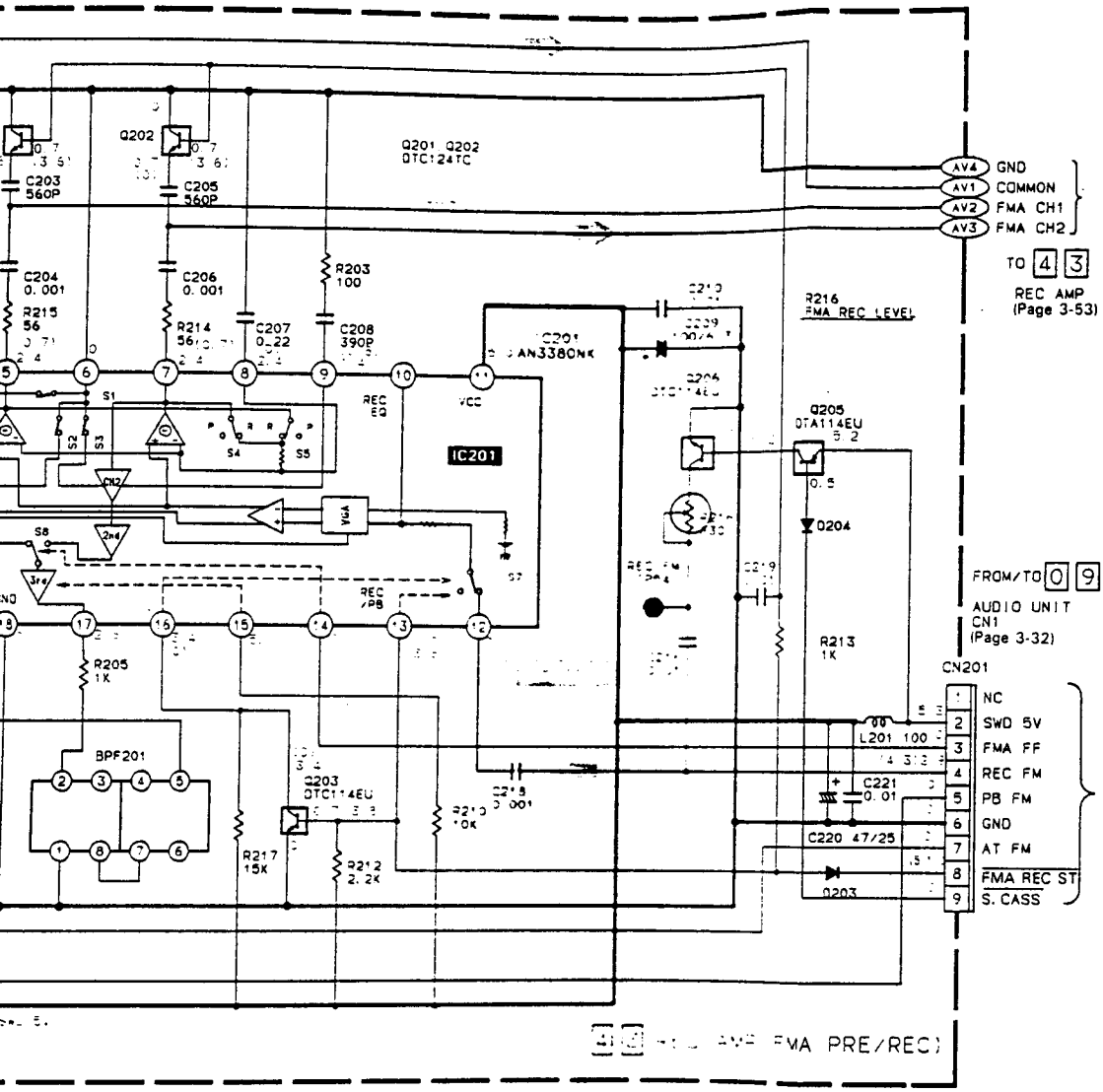


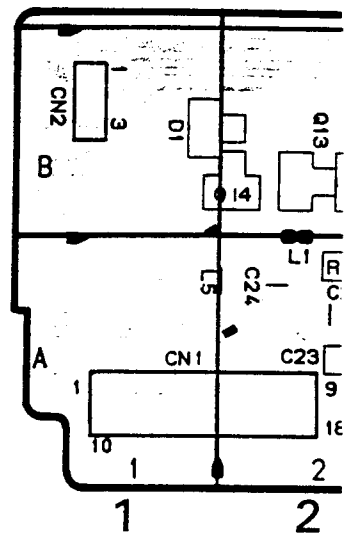
(A)

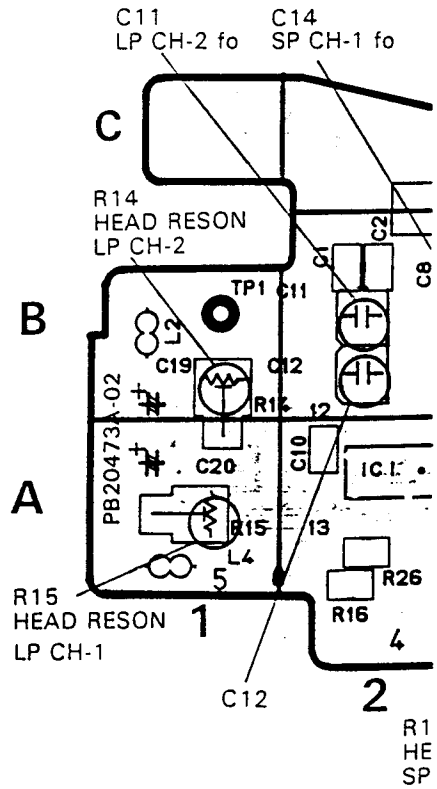
REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR		CAPACITOR	
Q1	A-4B	R1	A-4B	C3	A-4B
Q2	A-4B	R2	A-3A	C4	A-4B
Q3	A-3B	R3	A-4B	C6	A-3B
Q4	A-4B	R4	A-4B	C9	A-4B
Q7	A-3B	R5	A-3B	C15	A-3A
Q8	A-3B	R6	A-3B	C16	A-2A
Q9	A-3A	R7	A-4B	C18	A-5B
Q10	A-4A	R8	A-4B	C21	A-4A
Q12	A-3B	R9	A-4A	C23	A-2A
Q13	A-2B	R12	A-2A	C32	A-3B
Q14	A-2B	R13	A-5B	C33	A-2B
		R18	A-2A		
		R21	A-3B		
DIODE		R22	A-2B		
		R23	A-5B		
D1	A-1B	R25	A-3A		
D2	A-2B	R27	A-4A		

(B)

REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR	
Q5	B-3B	R10	B-4B
Q6	B-4B	R11	B-3A
Q11	B-4B	R14	B-1B
		R15	B-1A
		R16	B-2A
		R17	B-3A
		R19	B-4B
		R20	B-4B
		R24	B-2A
		R26	B-2A







(A)

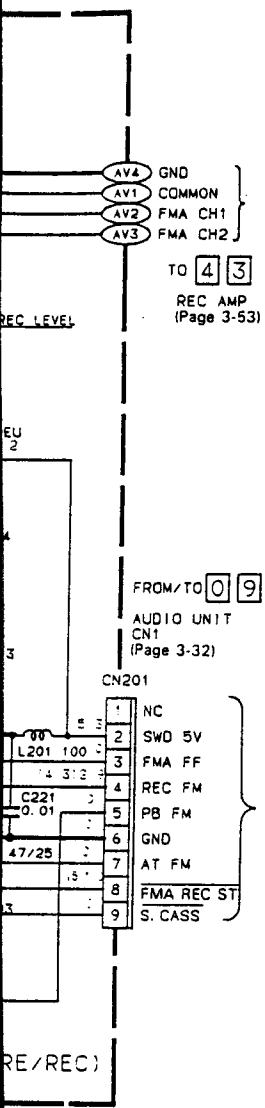
REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR		CAPACITOR	
	A-4B	R1	A-4B	C3	A-4B
	A-4B	R2	A-3A	C4	A-4B
	A-3B	R3	A-4B	C6	A-3B
	A-4B	R4	A-4B	C9	A-4B
	A-3B	R5	A-3B	C15	A-3A
	A-3B	R6	A-3B	C16	A-2A
	A-3A	R7	A-4B	C18	A-5B
0	A-4A	R8	A-4B	C21	A-4A
2	A-3B	R9	A-4A	C23	A-2A
3	A-2B	R12	A-2A	C32	A-3B
4	A-2B	R13	A-5B	C33	A-2B
		R18	A-2A		
DIODE		R21	A-3B		
		R22	A-2B		
		R23	A-5B		
	A-1B	R25	A-3A		
	A-2B	R27	A-4A		

(B)

REF No.	LOCATION
TRANSISTOR	
Q5	B-3B
Q6	B-4B
Q11	B-4B

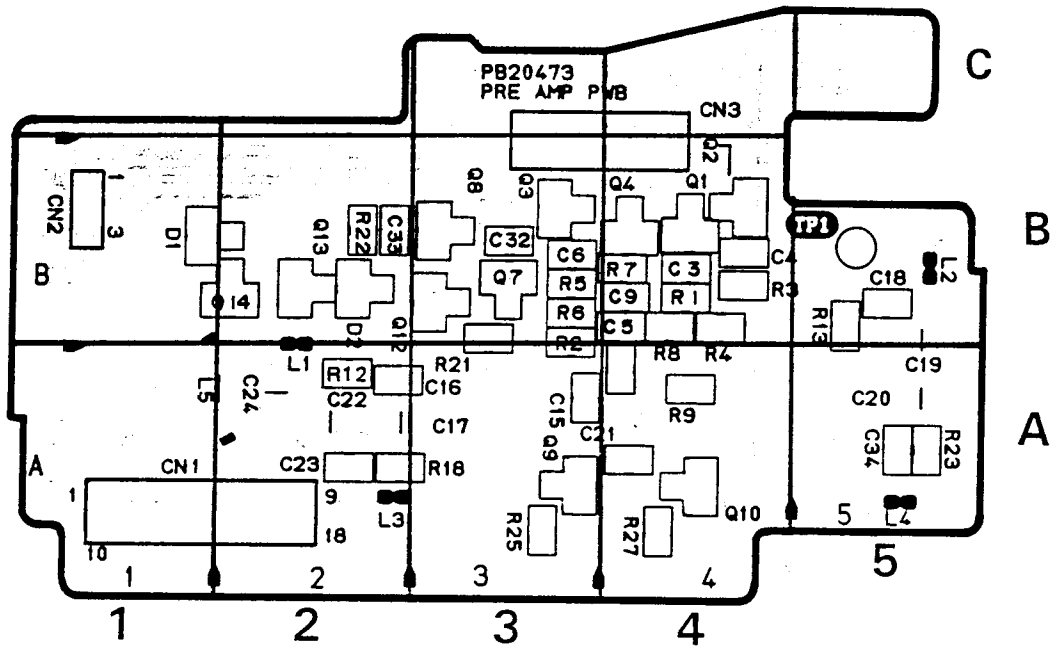
REF No.	LOCATION	REF No.	LOCATION
RESISTOR		CAPACITOR	
R10	B-4B	C1	B-2B
R11	B-3A	C2	B-2B
R14	B-1B	C7	B-3B
R15	B-1A	C8	B-2B
R16	B-2A	C10	B-2A
R17	B-3A	C11	B-2B
R19	B-4B	C12	B-2B
R20	B-4B	C13	B-3B
R24	B-2A	C14	B-3B
R26	B-2A	C25	B-3A
		C31	B-4B

3.29 PRE AMP CIRCUIT BOARD

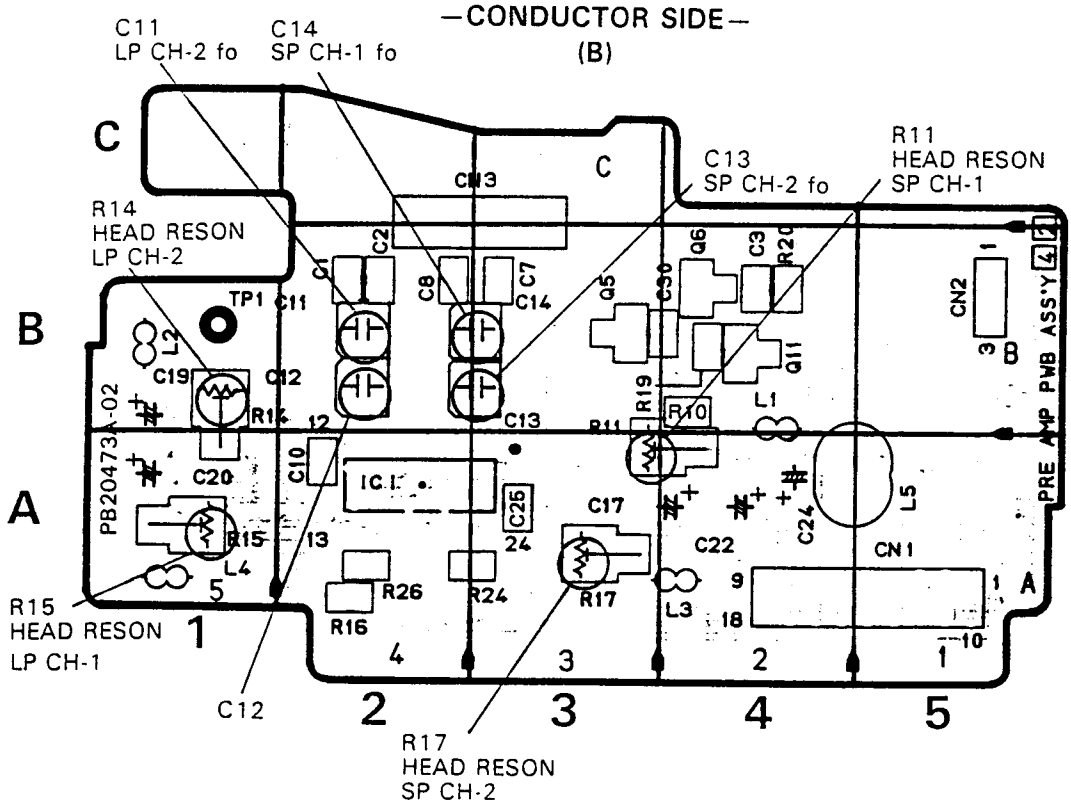


N	REF No.	LOCATION
	CAPACITOR	
	C1	B-2B
	C2	B-2B
	C7	B-3B
	C8	B-2B
	C10	B-2A
	C11	B-2B
	C12	B-2B
	C13	B-3B
	C14	B-3B
	C25	B-3A
	C31	B-4B

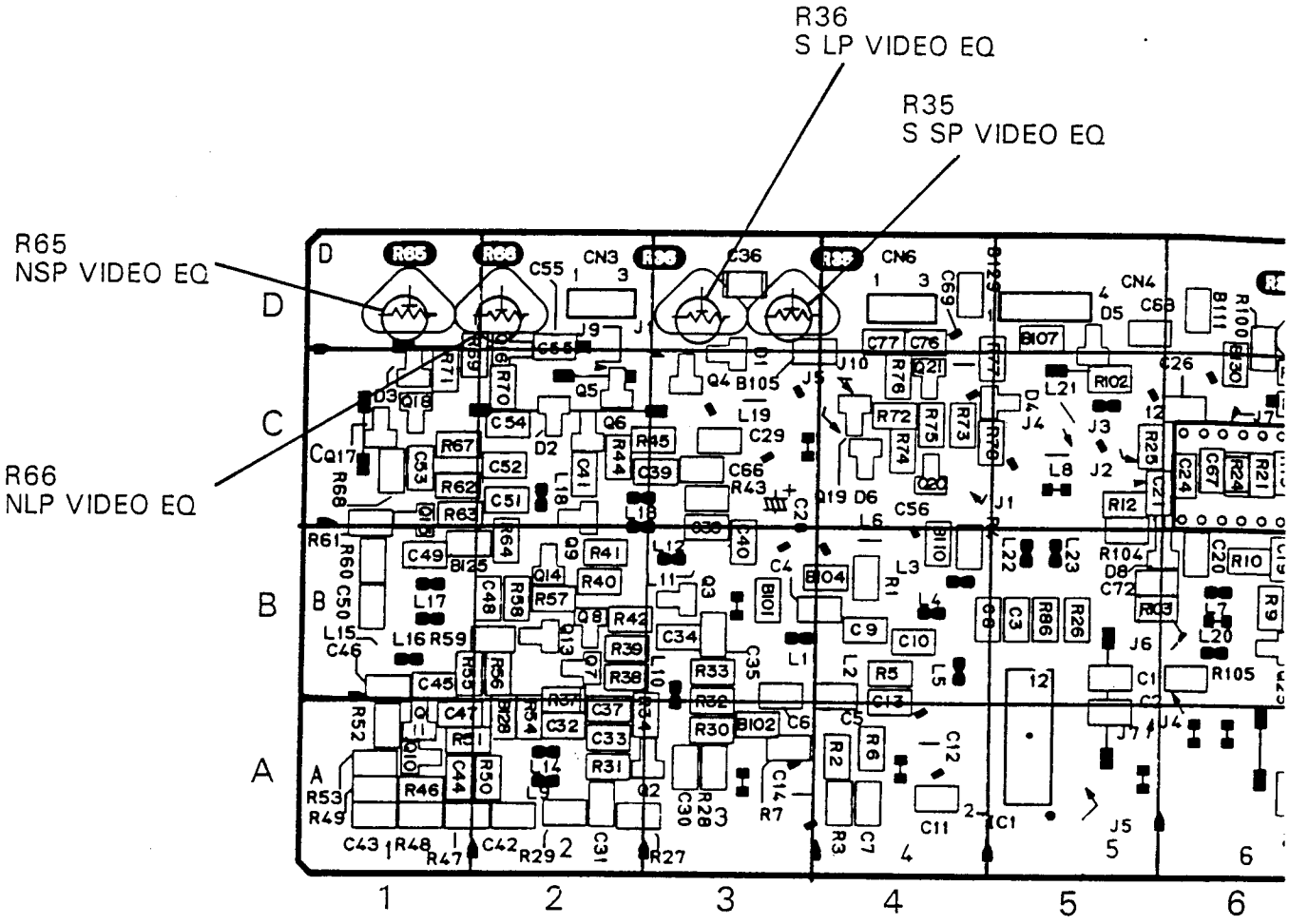
—COMPONENT SIDE—
(A)



—CONDUCTOR SIDE—
(B)



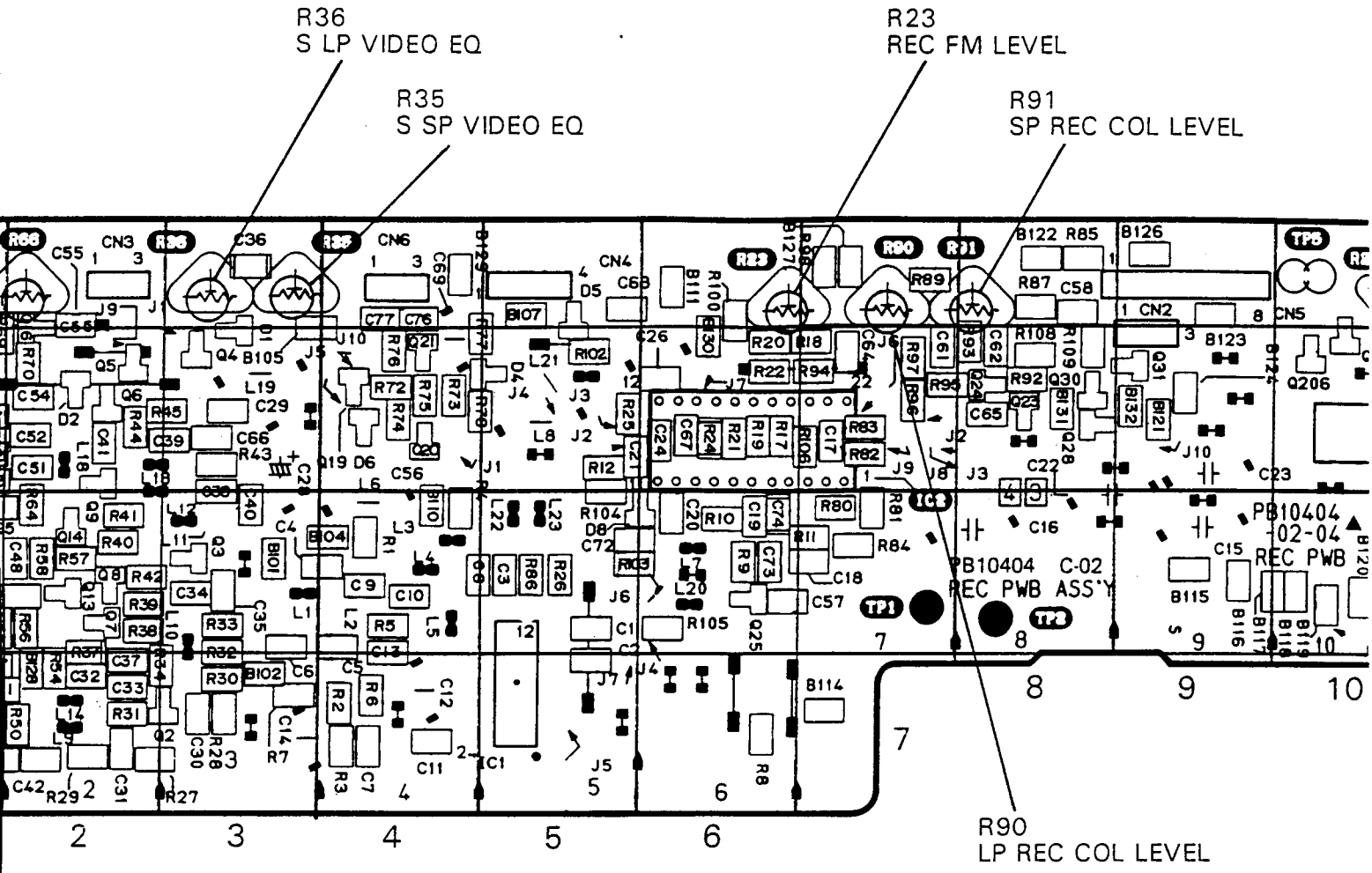
3.30 REC AMP CIRCUIT BOARD



• Address of chip parts

A-1
Address

REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR		RESISTOR		RESISTOR		CAPACITOR	
Q2	A-2	R1	B-3	R40	B-1	R75	C-3	C1	B-4
Q3	B-2	R2	A-3	R41	B-1	R76	C-3	C2	B-4
Q4	C-2	R3	A-3	R42	B-1	R77	D-3	C3	B-4
Q5	C-1	R4	B-3	R43	C-2	R78	C-3	C4	B-3
Q6	C-1	R5	B-3	R44	C-1	R80	B-6	C5	B-3
Q7	B-1	R6	A-3	R45	C-2	R81	B-6	C6	B-2
Q8	B-1	R7	A-2	R46	A-1	R82	C-6	C7	A-3
Q9	C-1	R8	A-5	R47	A-1	R83	C-6	C8	B-3
Q10	A-1	R9	B-5	R48	A-1	R84	B-6	C9	B-3
Q11	A-1	R10	B-5	R49	A-1	R85	D-7	C10	B-3
Q13	B-1	R11	B-6	R50	A-1	R86	B-4	C11	A-3
Q14	B-1	R12	C-4	R51	A-1	R87	D-7	C12	A-3
Q15	C-1	R17	C-5	R52	A-1	R89	D-6	C13	B-3
Q16	D-1	R18	C-6	R53	A-1	R90	D-6	C14	A-2
Q17	C-1	R19	C-5	R54	A-1	R91	D-6	C15	B-8
Q18	C-1	R20	C-5	R55	B-1	R92	C-7	C16	B-6
Q19	C-3	R21	C-5	R56	B-1	R93	C-7	C17	C-6
Q20	C-3	R22	C-5	R57	B-1	R94	C-6	C18	B-6
Q21	C-3	R23	D-5	R58	B-1	R95	C-6	C19	B-5
Q23	C-7	R24	C-5	R59	B-1	R96	C-6	C20	B-5
Q24	C-7	R25	C-4	R60	B-1	R97	C-6	C21	C-4
Q25	B-5	R26	B-4	R61	C-1	R98	D-6	C22	C-7
Q28	C-7	R27	A-1	R62	C-1	R100	D-5	C23	C-8
Q30	C-7	R28	A-2	R63	C-1	R102	C-4	C24	C-5
Q31	C-8	R29	A-1	R64	B-1	R103	B-4	C26	C-5
		R30	A-2	R65	D-1	R104	C-4	C27	C-5
DIODE		R31	A-1	R66	D-1	R105	B-5	C28	C-2
		R32	B-2	R67	C-1	R106	C-6	C29	C-2
D1	D-2	R33	B-2	R68	C-1	R108	C-7	C30	A-2
D2	C-1	R34	A-2	R69	D-1	R109	C-7	C31	A-1
D3	C-1	R35	D-2	R70	C-1			C32	A-1
D4	C-4	R36	D-2	R71	C-1			C33	A-1
D5	D-4	R37	B-1	R72	C-3			C34	B-2
D6	C-3	R38	B-1	R73	C-3			C35	B-2
D8	B-5	R39	B-1	R74	C-3			C36	D-2

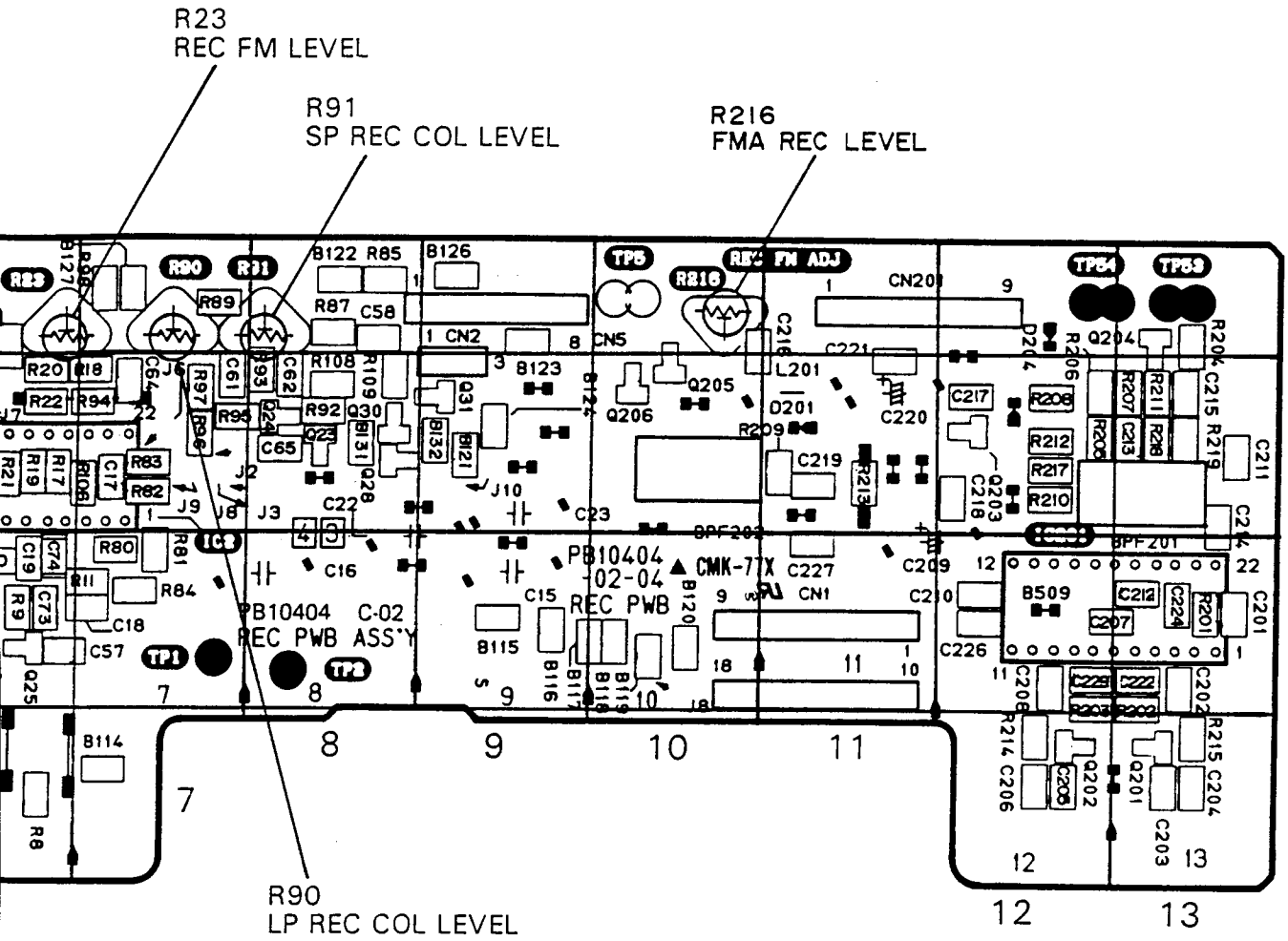


• Address of chip parts

A-1 — Address

REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR		RESISTOR		RESISTOR		CAPACITOR		CAPACITOR	
Q2	A-2	R1	B-3	R40	B-1	R75	C-3	C1	B-4	C37	B-1
Q3	B-2	R2	A-3	R41	B-1	R76	C-3	C2	B-4	C38	C-2
Q4	C-2	R3	A-3	R42	B-1	R77	D-3	C3	B-4	C39	C-2
Q5	C-1	R4	B-3	R43	C-2	R78	C-3	C4	B-3	C40	B-2
Q6	C-1	R5	B-3	R44	C-1	R80	B-6	C5	B-3	C41	C-1
Q7	B-1	R6	A-3	R45	C-2	R81	B-6	C6	B-2	C42	A-1
Q8	B-1	R7	A-2	R46	A-1	R82	C-6	C7	A-3	C43	A-1
Q9	C-1	R8	A-5	R47	A-1	R83	C-6	C8	B-3	C44	A-1
Q10	A-1	R9	B-5	R48	A-1	R84	B-6	C9	B-3	C45	B-1
Q11	A-1	R10	B-5	R49	A-1	R85	D-7	C10	B-3	C46	B-1
Q13	B-1	R11	B-6	R50	A-1	R86	B-4	C11	A-3	C47	A-1
Q14	B-1	R12	C-4	R51	A-1	R87	D-7	C12	A-3	C48	B-1
Q15	C-1	R17	C-5	R52	A-1	R89	D-6	C13	B-3	C49	B-1
Q16	D-1	R18	C-6	R53	A-1	R90	D-6	C14	A-2	C50	B-1
Q17	C-1	R19	C-5	R54	A-1	R91	D-6	C15	B-8	C51	C-1
Q18	C-1	R20	C-5	R55	B-1	R92	C-7	C16	B-6	C52	C-1
Q19	C-3	R21	C-5	R56	B-1	R93	C-7	C17	C-6	C53	C-1
Q20	C-3	R22	C-5	R57	B-1	R94	C-6	C18	B-6	C54	C-1
Q21	C-3	R23	D-5	R58	B-1	R95	C-6	C19	B-5	C55	D-1
Q23	C-7	R24	C-5	R59	B-1	R96	C-6	C20	B-5	C57	B-5
Q24	C-7	R25	C-4	R60	B-1	R97	C-6	C21	C-4	C58	D-7
Q25	B-5	R26	B-4	R61	C-1	R98	D-6	C22	C-7	C61	C-6
Q28	C-7	R27	A-1	R62	C-1	R100	D-5	C23	C-8	C62	C-7
Q30	C-7	R28	A-2	R63	C-1	R102	C-4	C24	C-5	C63	D-4
Q31	C-8	R29	A-1	R64	B-1	R103	B-4	C26	C-5	C64	C-6
		R30	A-2	R65	D-1	R104	C-4	C27	C-5	C65	C-7
DIODE		R31	A-1	R66	D-1	R105	B-5	C28	C-2	C66	C-2
		R32	B-2	R67	C-1	R106	C-6	C29	C-2	C67	C-5
D1	D-2	R33	B-2	R68	C-1	R108	C-7	C30	A-2	C69	C-3
D2	C-1	R34	A-2	R69	D-1	R109	C-7	C31	A-1	C72	B-4
D3	C-1	R35	D-2	R70	C-1			C32	A-1	C73	B-5
D4	C-4	R36	D-2	R71	C-1			C33	A-1	C74	B-5
D5	D-4	R37	B-1	R72	C-3			C34	B-2	C76	D-3
D6	C-3	R38	B-1	R73	C-3			C35	B-2	C77	D-3
D8	B-5	R39	B-1	R74	C-3			C36	D-2		

REF No.	LOCATION	REF No.	LOCATION	REF No.
TRANSISTOR		RESISTOR		CAP
Q201	A-12	R201	B-12	C201
Q202	A-11	R202	B-12	C202
Q203	C-11	R203	B-11	C203
Q204	D-12	R204	D-12	C204
Q205	D-9	R205	C-11	C205
Q206	C-9	R206	C-11	C206
		R207	C-12	C207
DIODE		R208	C-11	C208
		R209	C-10	C209
D201	C-10	R210	C-11	C210
D203	C-11	R211	C-12	C211
D204	D-11	R212	C-11	C212
		R213	C-10	C213
		R214	A-11	C214
		R215	A-12	C215
		R216	D-9	C216
		R217	C-11	C217
		R218	C-12	C218
		R219	C-12	C219
				C220
				C221
				C222
				C223
				C224
				C226
				C227



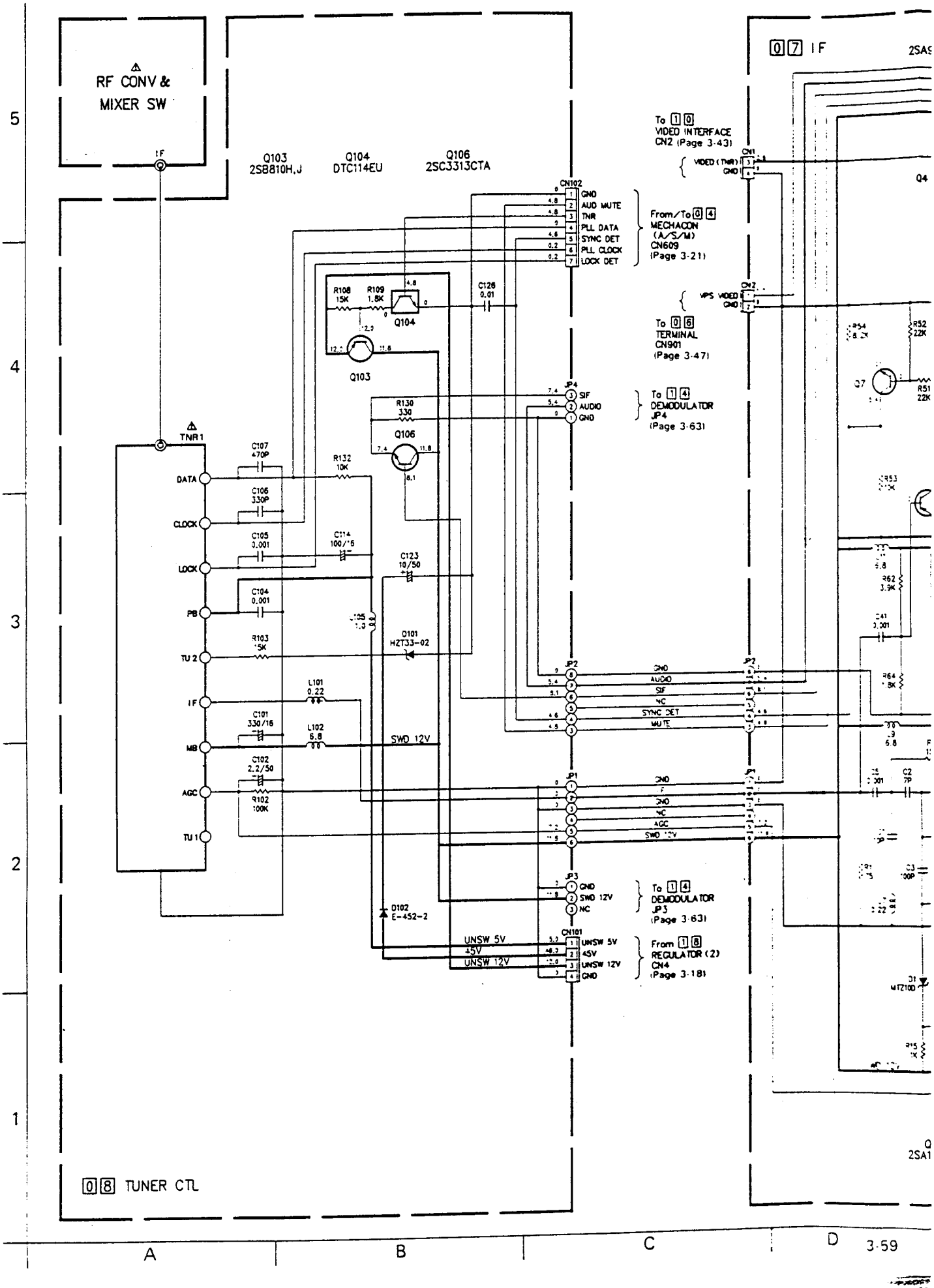
REF No.	LOCATION
CAPACITOR	
C37	B-1
C38	C-2
C39	C-2
C40	B-2
C41	C-1
C42	A-1
C43	A-1
C44	A-1
C45	B-1
C46	B-1
C47	A-1
C48	B-1
C49	B-1
C50	B-1
C51	C-1
C52	C-1
C53	C-1
C54	C-1
C55	D-1
C57	B-5
C58	D-7
C61	C-6
C62	C-7
C63	D-4
C64	C-6
C65	C-7
C66	C-2
C67	C-5
C69	C-3
C72	B-4
C73	B-5
C74	B-5
C76	D-3
C77	D-3

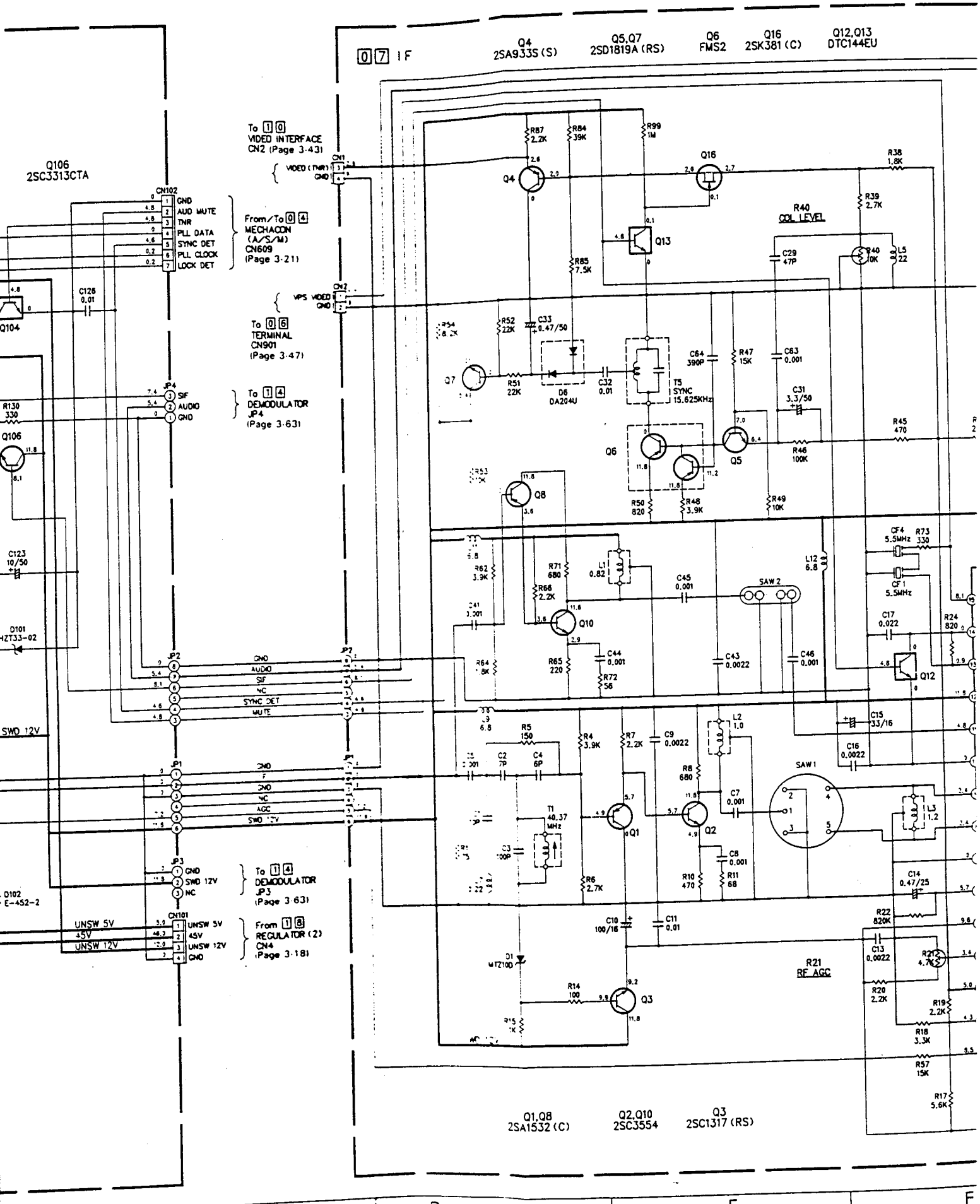
REF No.	LOCATION
TRANSISTOR	
Q201	A-12
Q202	A-11
Q203	C-11
Q204	D-12
Q205	D-9
Q206	C-9
DIODE	
D201	C-10
D203	C-11
D204	D-11

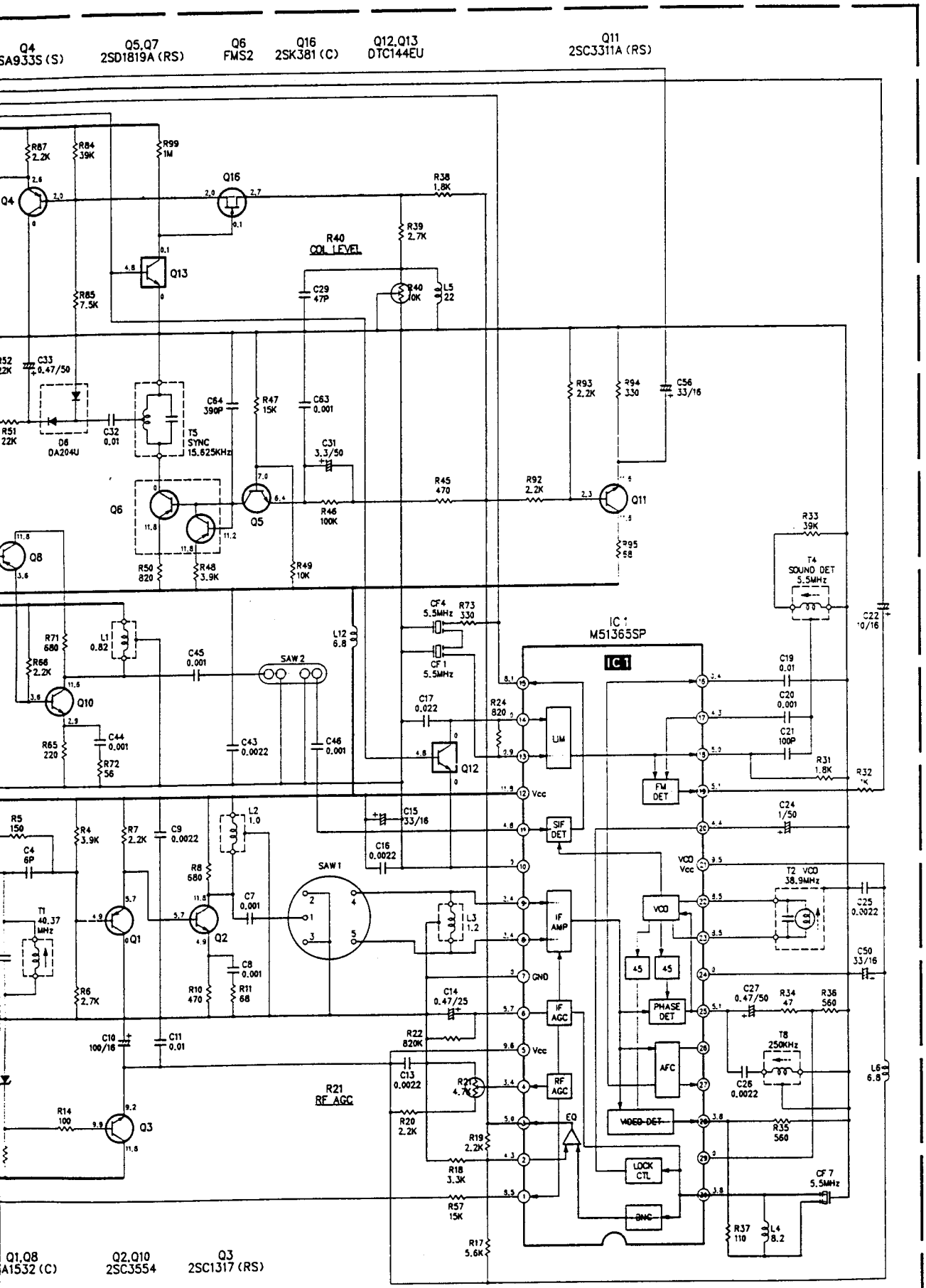
REF No.	LOCATION
RESISTOR	
R201	B-12
R202	B-12
R203	B-11
R204	D-12
R205	C-11
R206	C-11
R207	C-12
R208	C-11
R209	C-10
R210	C-11
R211	C-12
R212	C-11
R213	C-10
R214	A-11
R215	A-12
R216	D-9
R217	C-11
R218	C-12
R219	C-12

REF No.	LOCATION
CAPACITOR	
C201	B-12
C202	B-12
C203	A-12
C204	A-12
C205	A-11
C206	A-11
C207	B-12
C208	B-11
C209	C-11
C210	B-11
C211	C-12
C212	B-12
C213	C-12
C214	C-12
C215	C-12
C216	D-9
C217	C-11
C218	C-11
C219	C-10
C220	C-10
C221	D-10
C222	B-12
C223	B-11
C224	B-12
C226	B-11
C227	C-10

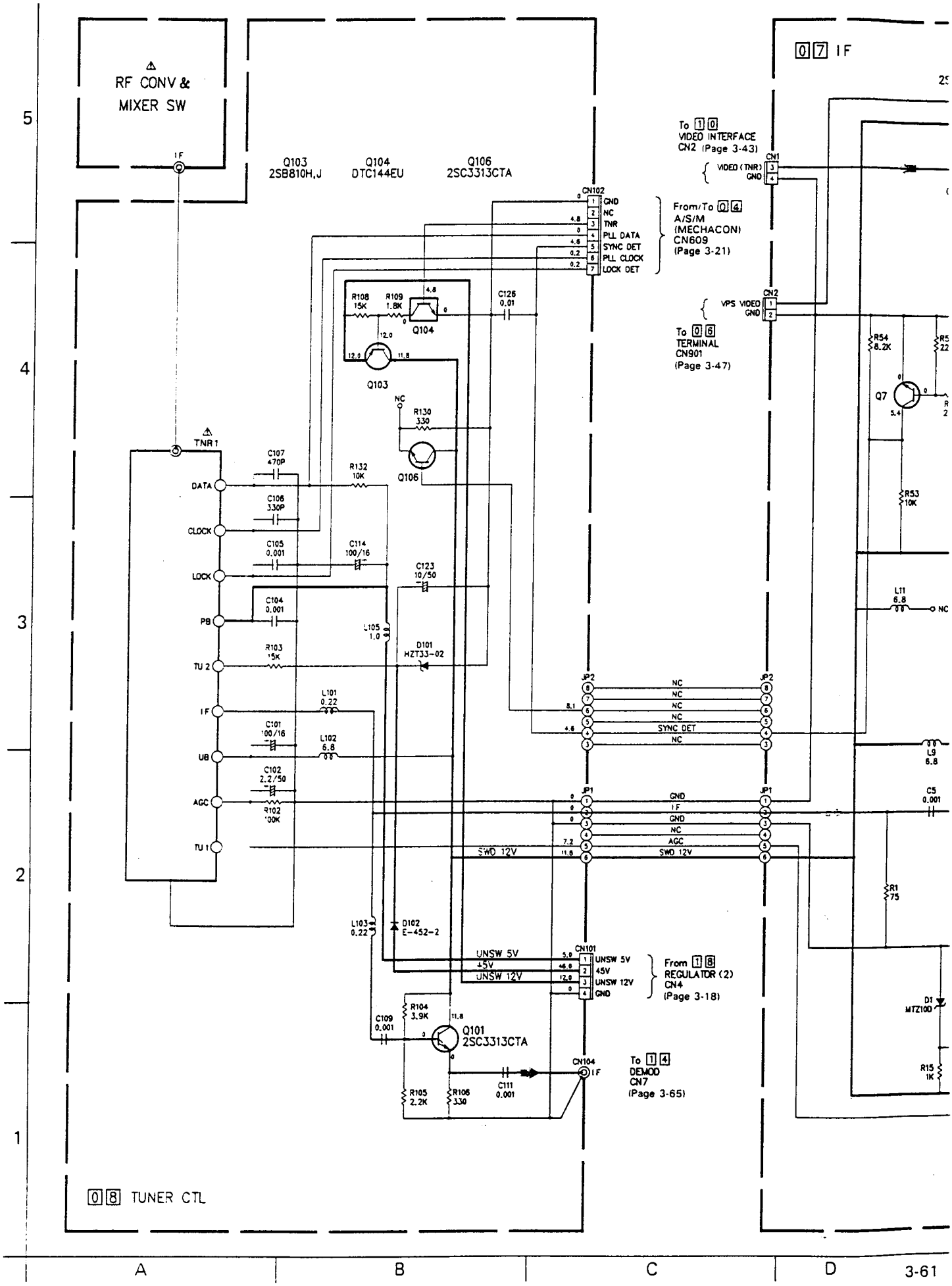
3.31 IF & TUNER/CTL SCHEMATIC DIAGRAMS (E/EG Only)

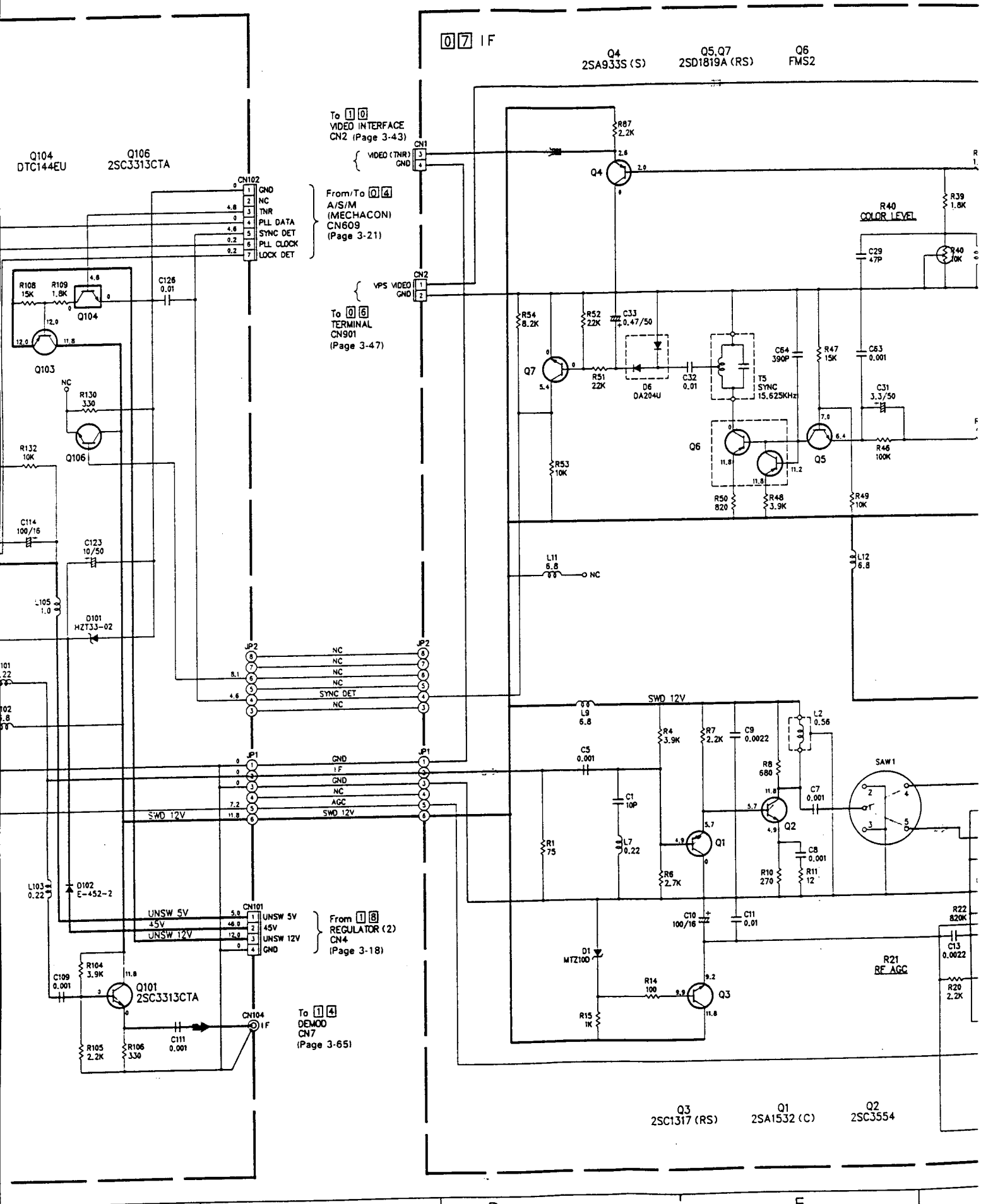


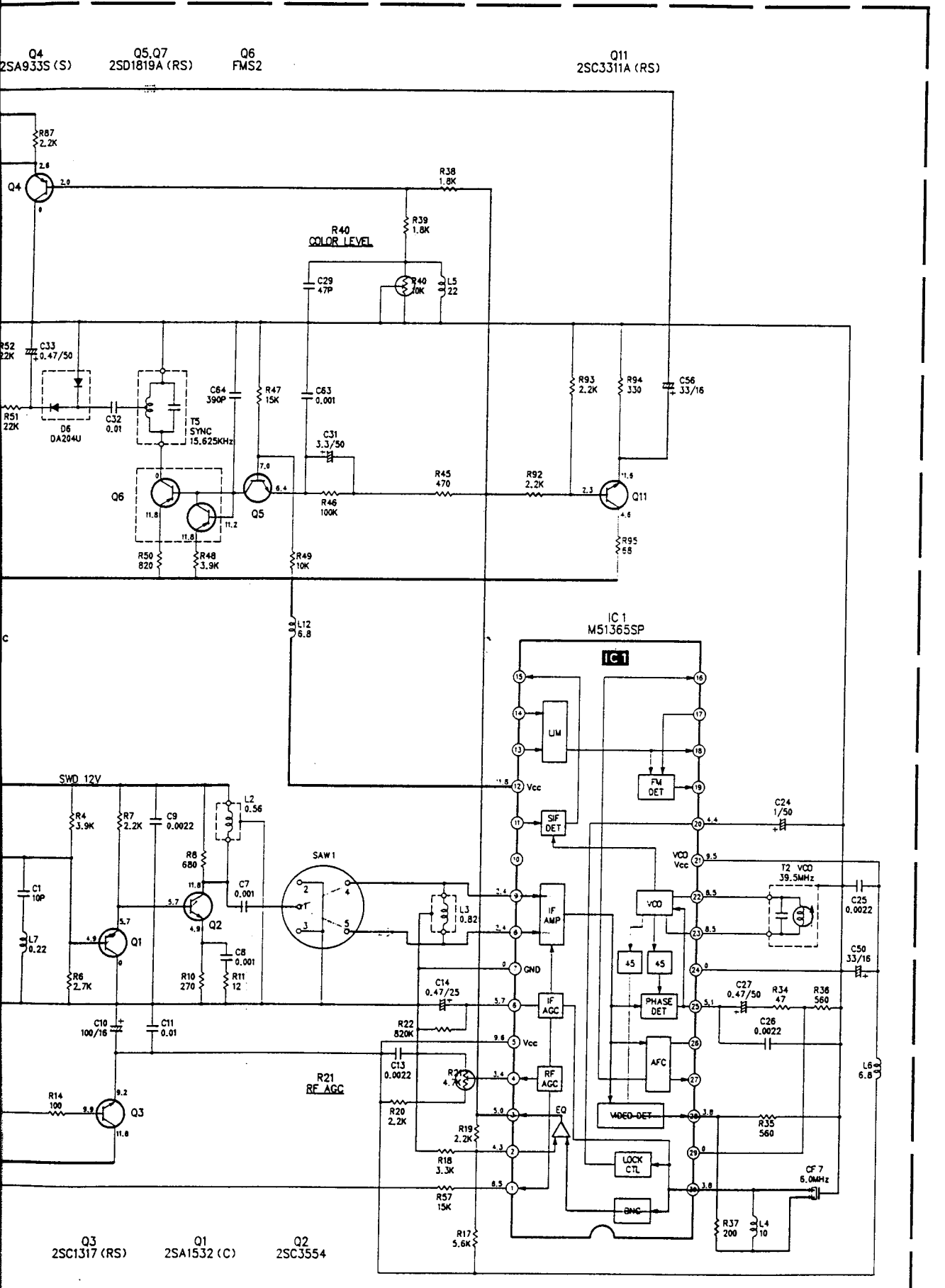

07 IF
Q4 2SA933S (S)
Q5,Q7 2SD1819A (RS)
Q6 FMS2
Q16 2SK381 (C)
Q12,Q13 DTC144EU
Q106 2SC3313CTA
To 10 VIDEO INTERFACE CN2 (Page 3-43)
From/To 04 MECHACON (A/S/M) CN609 (Page 3-21)
To 06 TERMINAL CN901 (Page 3-47)
To 14 DEMODULATOR JP4 (Page 3-63)
To 14 DEMODULATOR JP3 (Page 3-63)
From 18 REGULATOR (2) CN4 (Page 3-18)
CN102
CN101
JP1
JP2
JP3
JP4
GND
AUD MUTE
TNR
PLL DATA
SYNC DET
PLL CLOCK
LOCK DET
AUDIO
SIF
NC
MUTE
AGC
SW0 12V
UNSW 5V
+5V
UNSW 12V
R40 COL LEVEL
R21 RF AGC
SAW1
SAW2
T1 40.37 MHz
T5 SYNC 15.625KHz
D6 DA204U
D1 MTZ10D
Q1,Q8 2SA1532 (C)
Q2,Q10 2SC3554
Q3 2SC1317 (RS)


Q4
SA933S (S)
Q5,Q7
2SD1819A (RS)
Q6
FMS2
Q16
2SK381 (C)
Q12,Q13
DTC144EU
Q11
2SC3311A (RS)
IC1
M51365SP
R40
COL LEVEL
R21
RF AGC
T5
SYNC
15.625KHz
D6
DA204U
SAW1
SAW2
T1
40.37
MHz
T2 VCO
38.9MHz
T4
SOUND DET
5.5MHz
T8
250KHz
CF1
5.5MHz
CF4
5.5MHz
CF7
5.5MHz
LIM
SIF
DET
IF
AMP
IF
AGC
RF
AGC
EQ
VCO
PHASE
DET
AFC
VIDEO DET
LOCK
CTL
SNC
FM
DET
Vcc
GND
Q1,Q8
A1532 (C)
Q2,Q10
2SC3554
Q3
2SC1317 (RS)

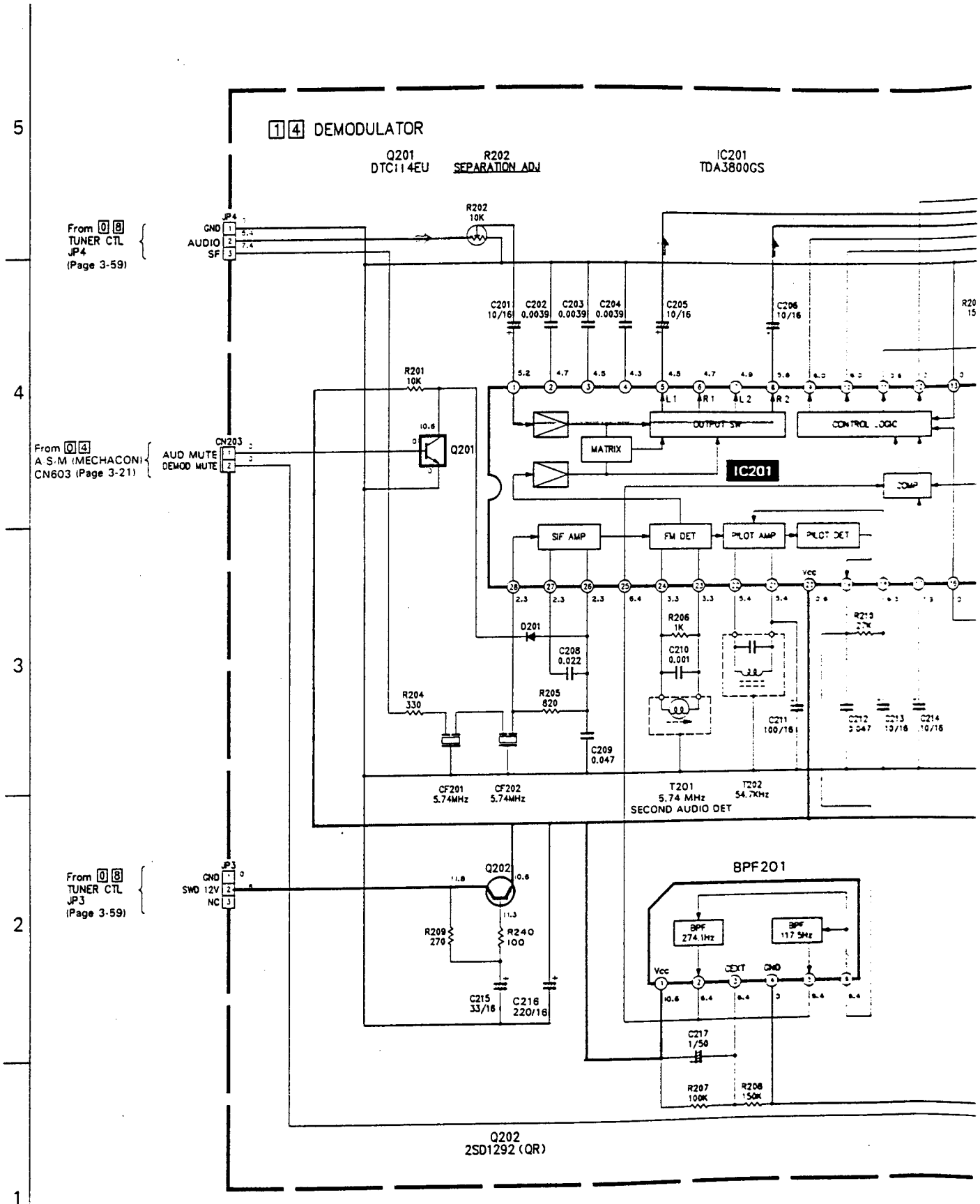
3.32 IF & TUNER/CTL SCHEMATIC DIAGRAMS (EK Only)




07 IF
Q4 2SA933S (S)
Q5,Q7 2SD1819A (RS)
Q6 FMS2
Q104 DTC144EU
Q106 2SC3313CTA
To 10 VIDEO INTERFACE CN2 (Page 3-43)
From/To 04 A/S/M (MECHACON) CN609 (Page 3-21)
To 06 TERMINAL CN901 (Page 3-47)
CN102
GND
NC
TNR
PLL DATA
SYNC DET
PLL CLOCK
LOCK DET
CN1
VIDEO (TNR)
GND
CN2
VPS VIDEO
GND
R87 2.2K
R40 COLOR LEVEL
R39 1.8K
C29 47P
R54 8.2K
R52 22K
C33 0.47/50
R51 22K
D6 DA204U
C32 0.01
T5 SYNC 15.625KHz
C64 390P
R47 15K
C63 0.001
C31 3.3/50
R46 100K
R53 10K
R50 820
R48 3.9K
R49 10K
L11 6.8
L12 6.8
NC
SWD 12V
L9 6.8
L2 0.56
R4 3.9K
R7 2.2K
C9 0.0022
C5 0.001
C1 10P
L7 0.22
R1 75
R6 2.7K
R8 680
C7 0.001
R10 270
R11 12
C8 0.001
SAW1
JP2
JP1
GND
IF
AGC
SYNC DET
R108 15K
R109 1.8K
C126 0.01
R130 330
R132 10K
C114 100/16
C123 10/50
L105 1.0
D101 HZT33-02
L103 0.22
D102 E-452-2
UNSW 5V
45V
UNSW 12V
From 18 REGULATOR (2) CN4 (Page 3-18)
R104 3.9K
C109 0.001
Q101 2SC3313CTA
R105 2.2K
R106 330
C111 0.001
CN104
To 14 DEMOD CN7 (Page 3-65)
C10 100/16
C11 0.01
D1 MTZ10D
R14 100
R15 1K
Q3
R22 820K
C13 0.0022
R20 2.2K
R21 RF AGC
Q3 2SC1317 (RS)
Q1 2SA1532 (C)
Q2 2SC3554
B
C
D
3-61
3-62
E

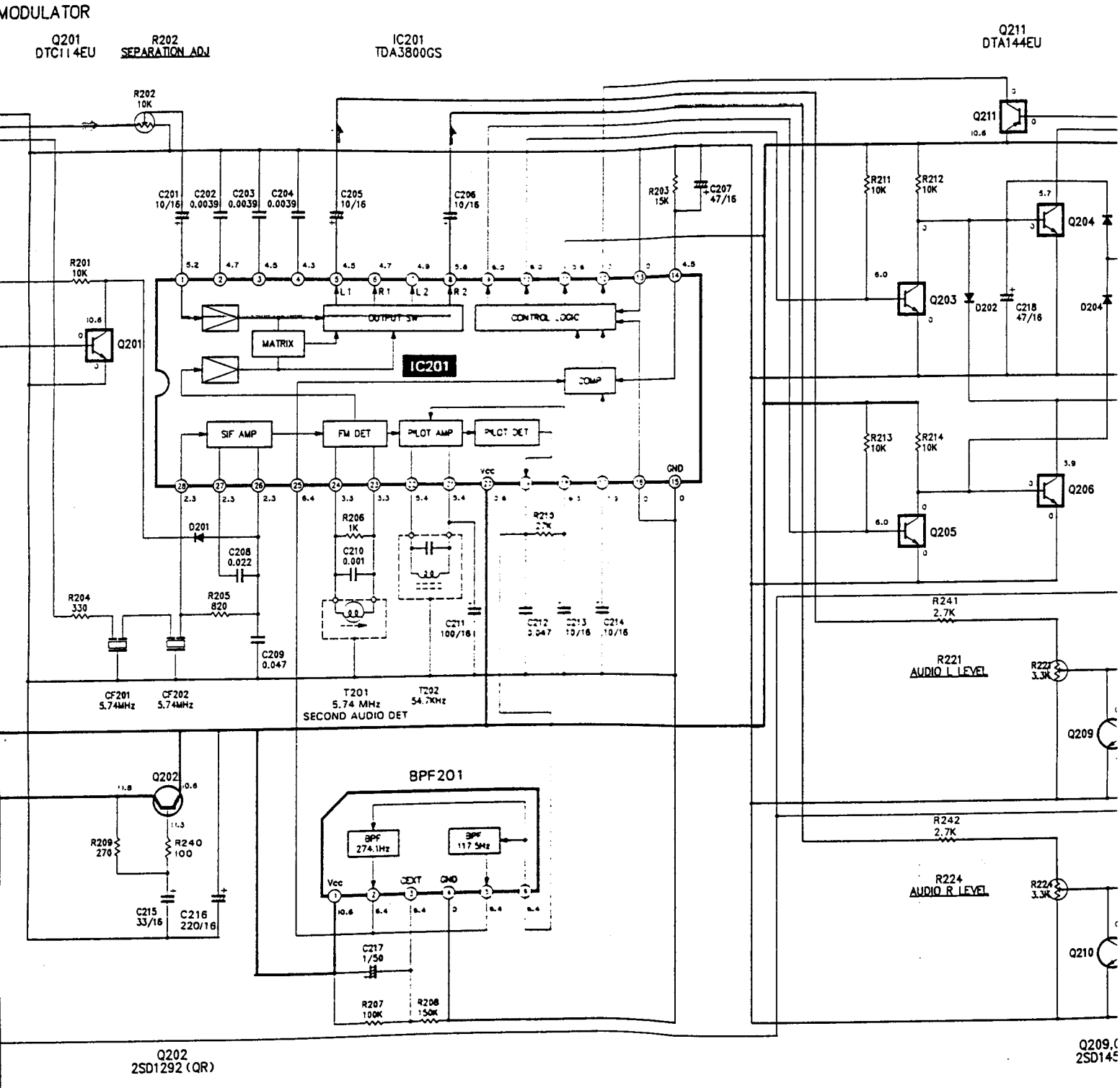

Q4
2SA933S (S)
Q5,Q7
2SD1819A (RS)
Q6
FMS2
Q11
2SC3311A (RS)
R87
2.2K
Q4
R38
1.8K
R39
1.8K
R40
COLOR LEVEL
C29
47P
R40
10K
L5
22
C33
0.47/50
R51
22K
D6
DA204U
C32
0.01
T5
SYNC
15.625KHz
C64
390P
R47
15K
C63
0.001
C31
3.3/50
R46
100K
R45
470
R92
2.2K
R93
2.2K
R94
330
C56
33/16
Q6
Q5
Q11
R50
820
R48
3.9K
R49
10K
R95
68
L12
6.8
IC 1
M51365SP
IC1
LIM
FM DET
Vcc
SIF DET
C24
1/50
VCO Vcc
T2 VCO
39.5MHz
C25
0.0022
SWD 12V
L2
0.56
R4
3.9K
R7
2.2K
C9
0.0022
R8
680
SAW1
C7
0.001
L3
0.82
IF AMP
VCO
C1
10P
L7
0.22
Q1
Q2
C8
0.001
R6
2.7K
R10
270
R11
12
GND
45
45
C50
33/16
C14
0.47/25
IF AGC
PHASE DET
C27
0.47/50
R34
47
R36
560
C26
0.0022
C10
100/16
C11
0.01
R22
820K
C13
0.0022
R21
4.7K
RF AGC
AFC
L6
6.8
R21
RF AGC
R14
100
Q3
R20
2.2K
EQ
VIDEO DET
R35
560
R19
2.2K
R18
3.3K
LOCK CTL
CF 7
6.0MHz
R57
15K
GND
R37
200
L4
10
R17
5.6K
Q3
2SC1317 (RS)
Q1
2SA1532 (C)
Q2
2SC3554

3.33 DEMODULATOR SCHEMATIC DIAGRAM (E/EG Only)

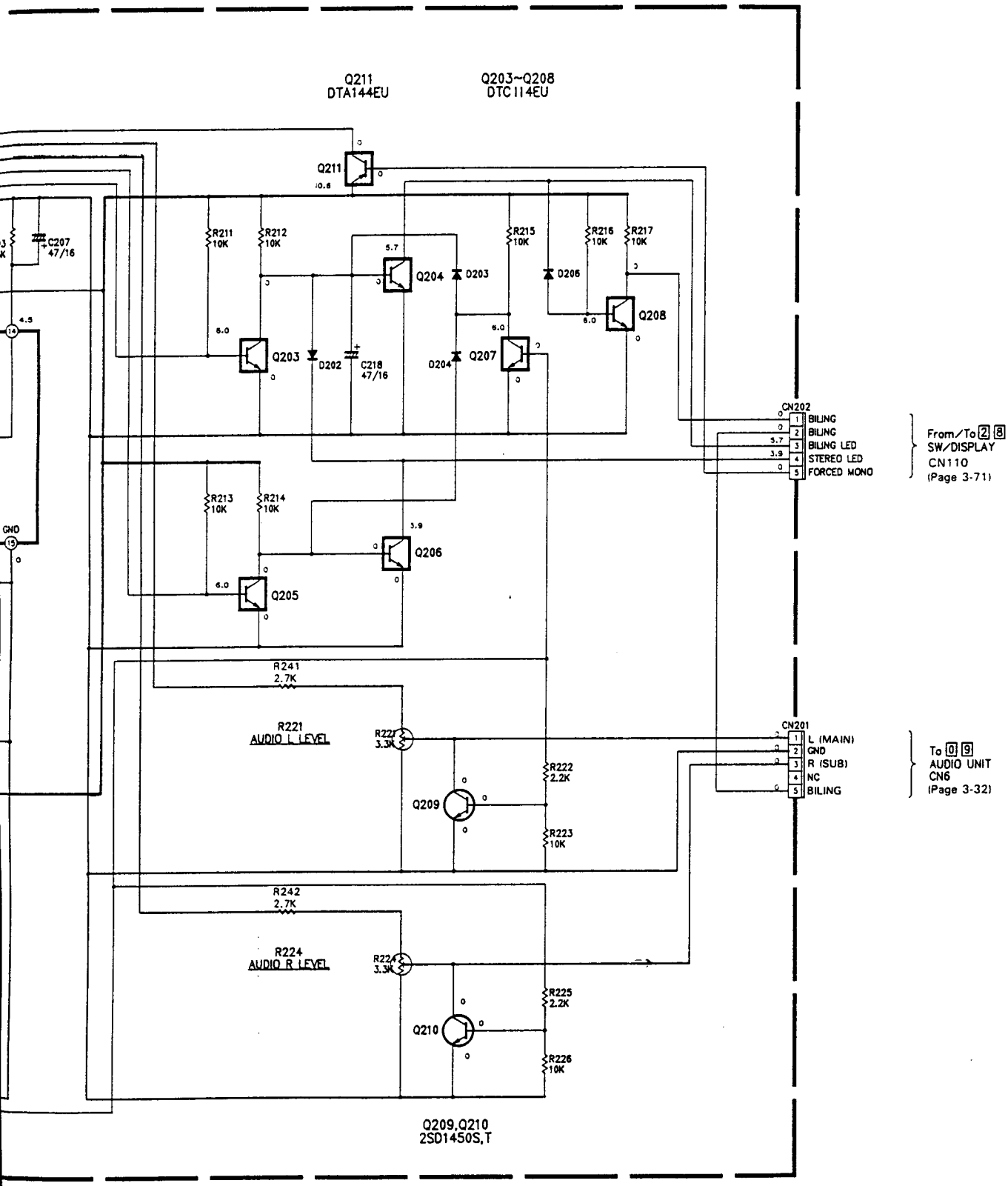


ATIC DIAGRAM (E/EG Only)

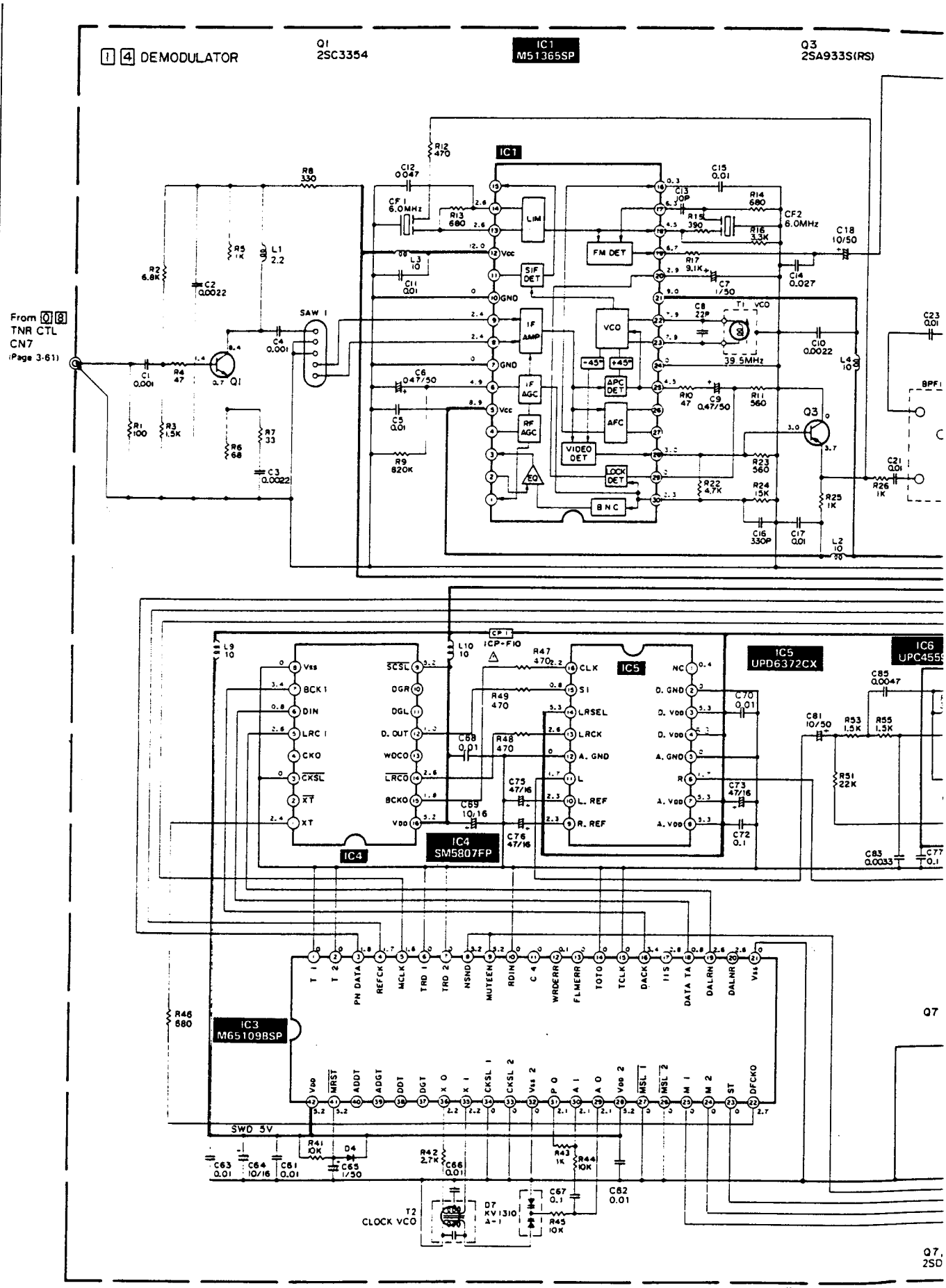
Note: Volt
digit



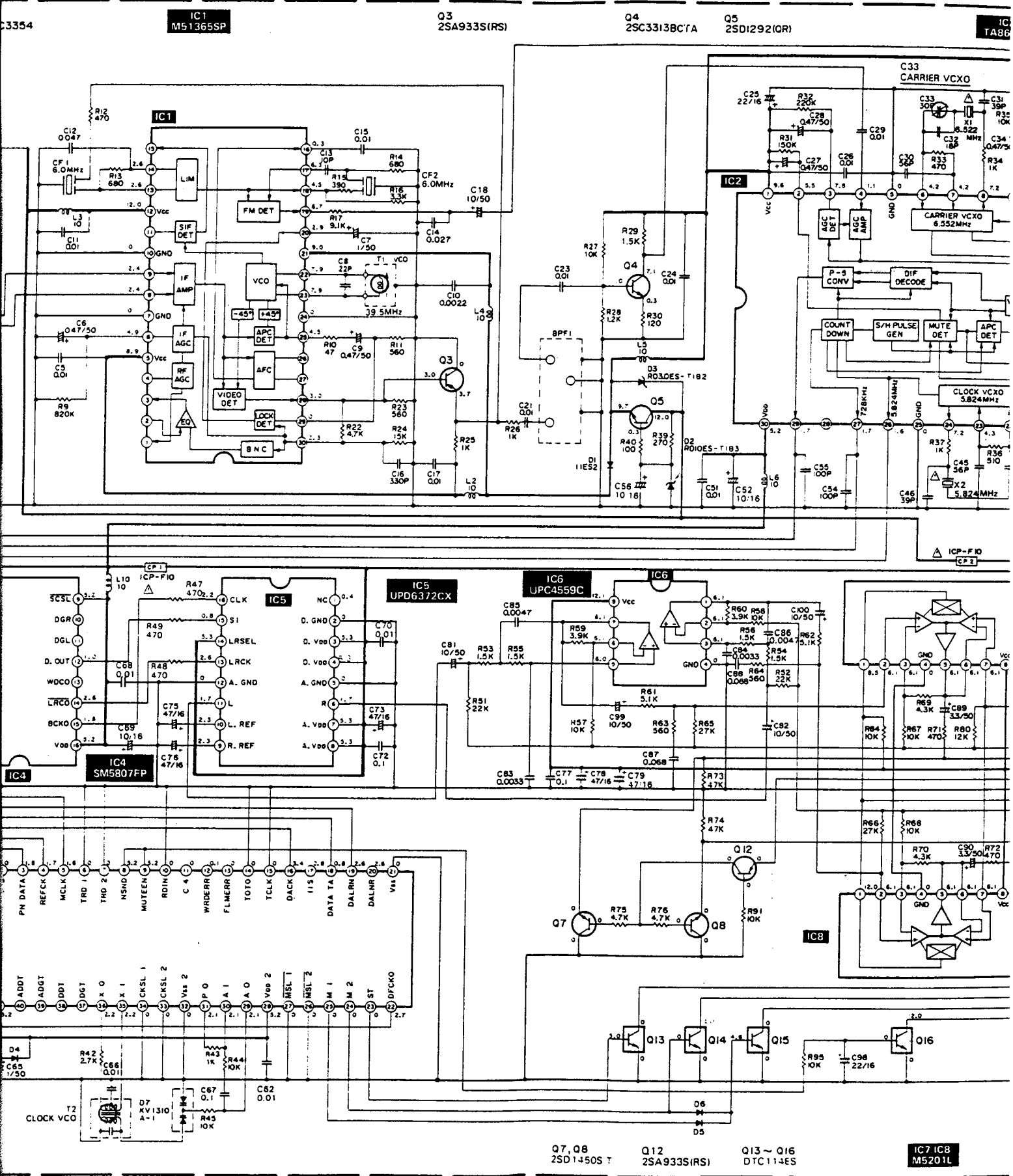
Note: Voltages are DC-measured with a
digital voltmeter during stop and tuner mode. (3 ch)



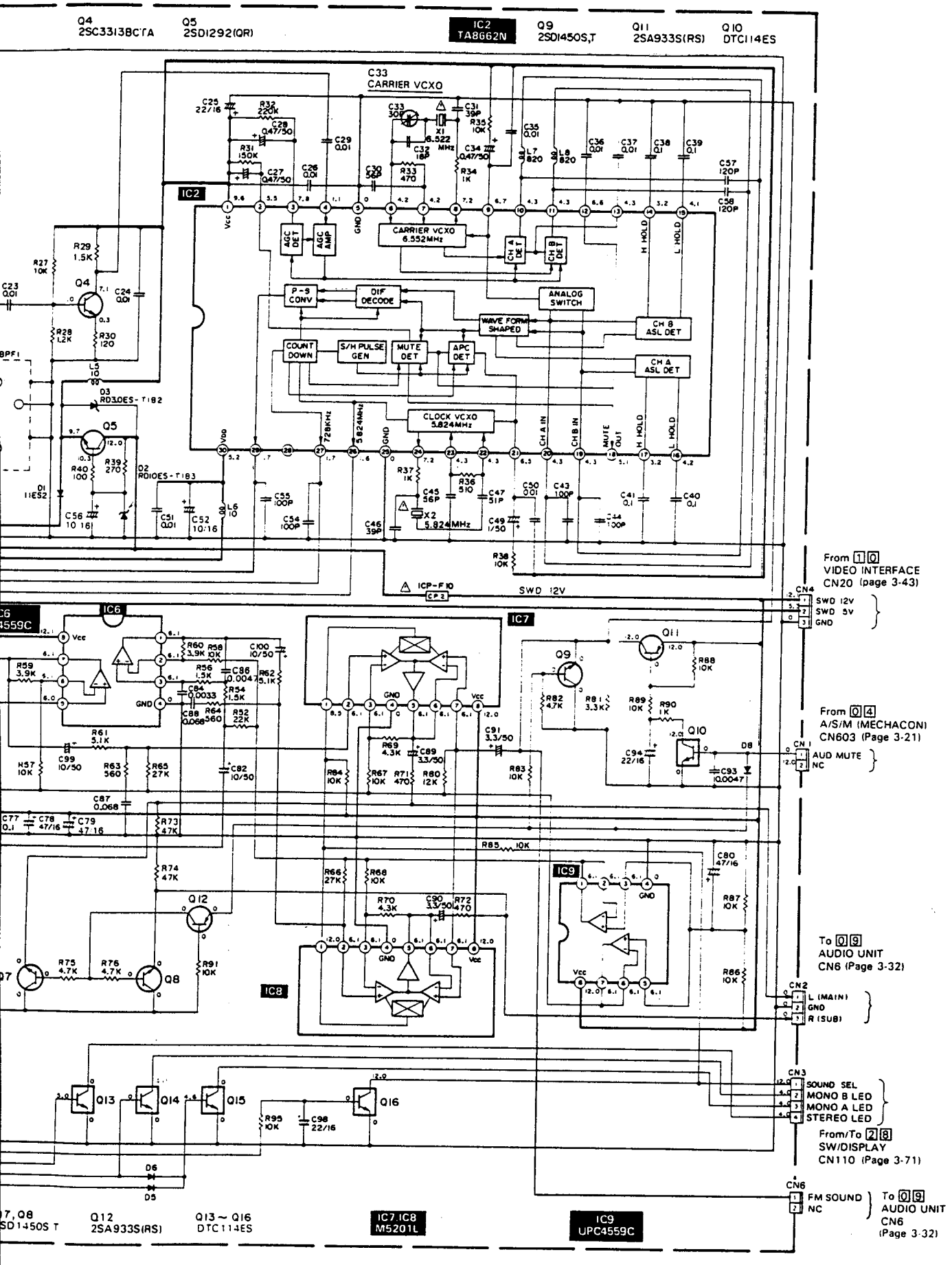
3.34 DEMODULATOR SCHEMATIC DIAGRAM (EK Only)



IC DIAGRAM (EK Only)

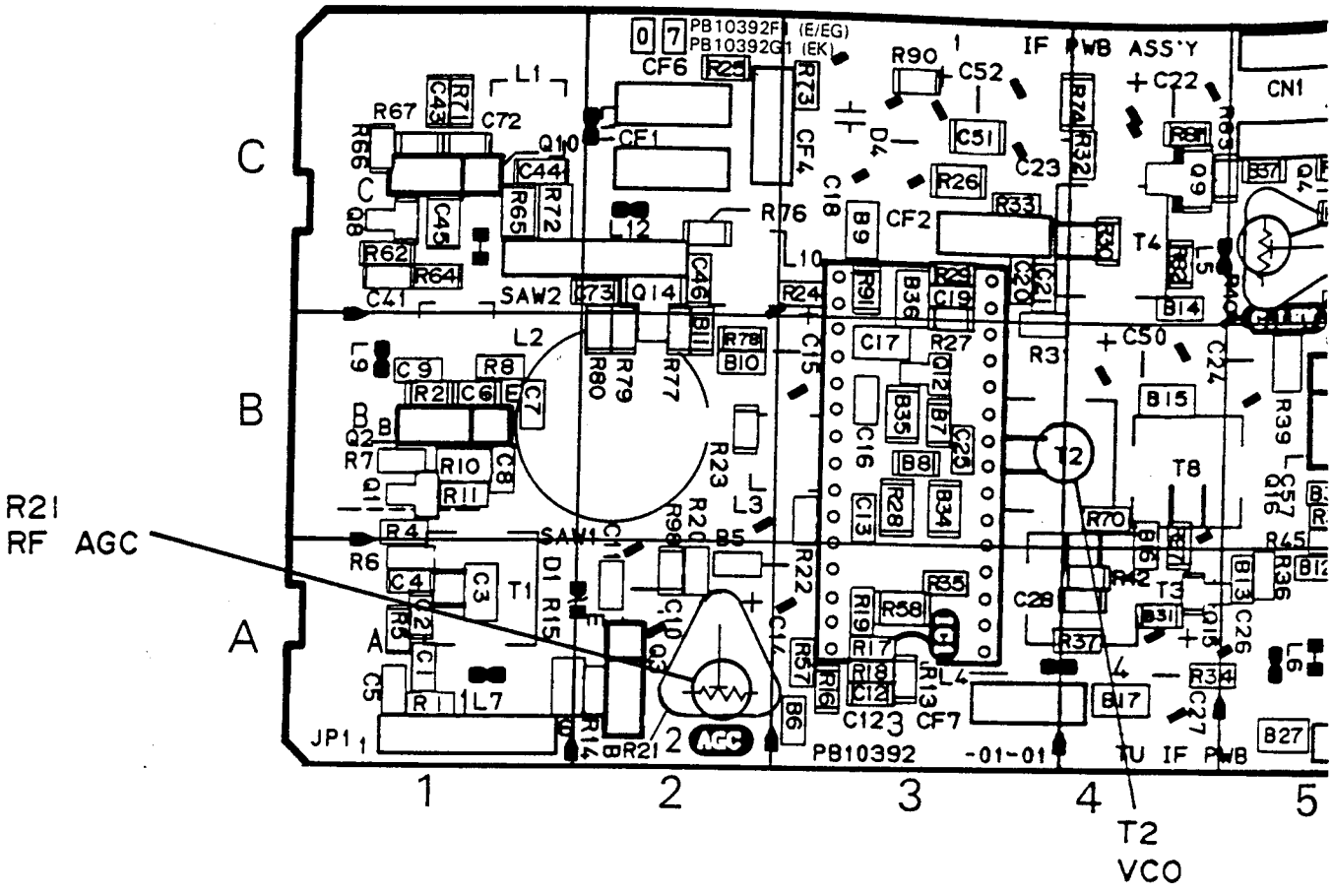


NOTES: Voltages are DC-measured with a digital voltmeter during tuner mode.

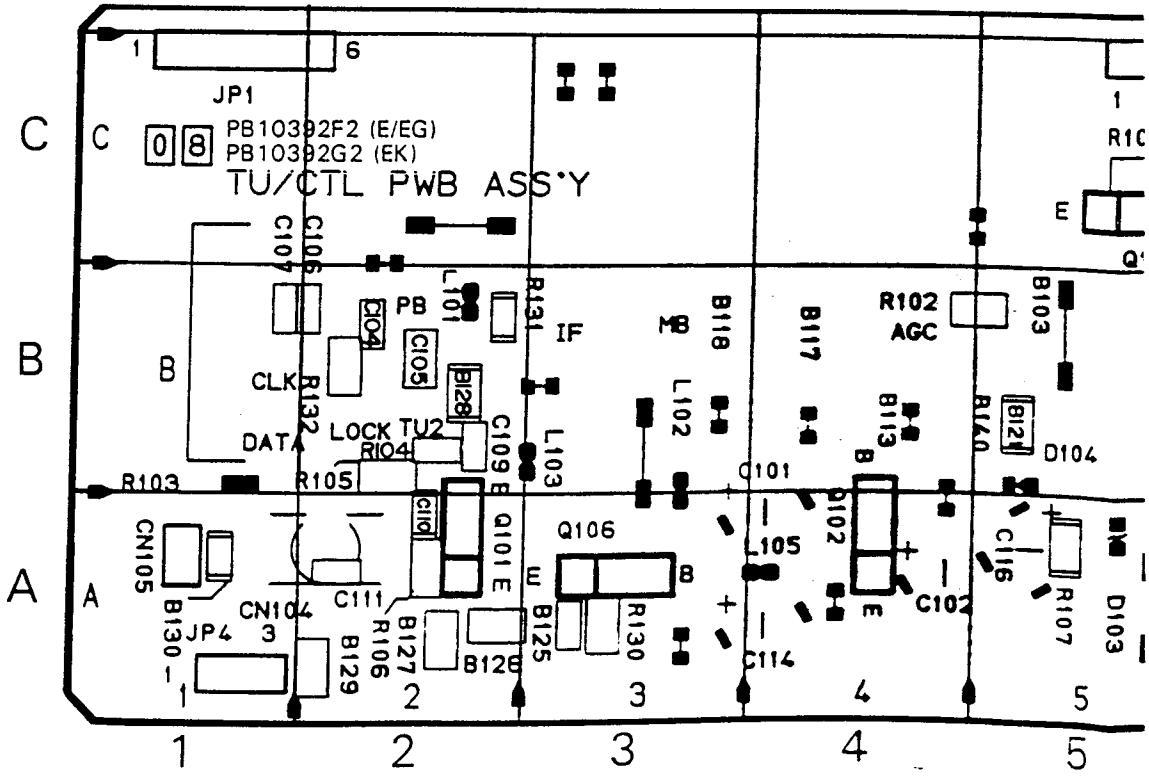


3.35 IF & TUNER CTL CIRCUIT BOARDS

—IF—

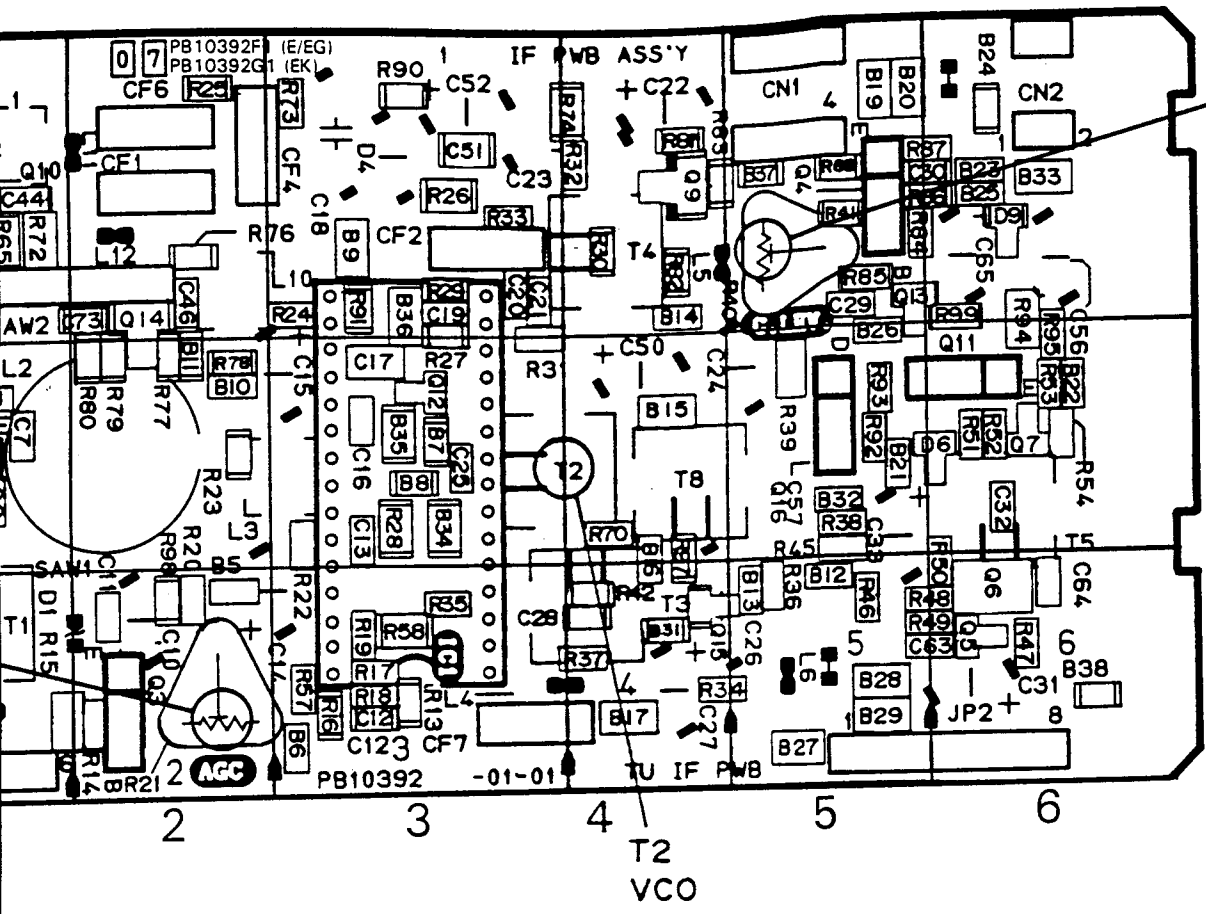


—TUNER CTL—



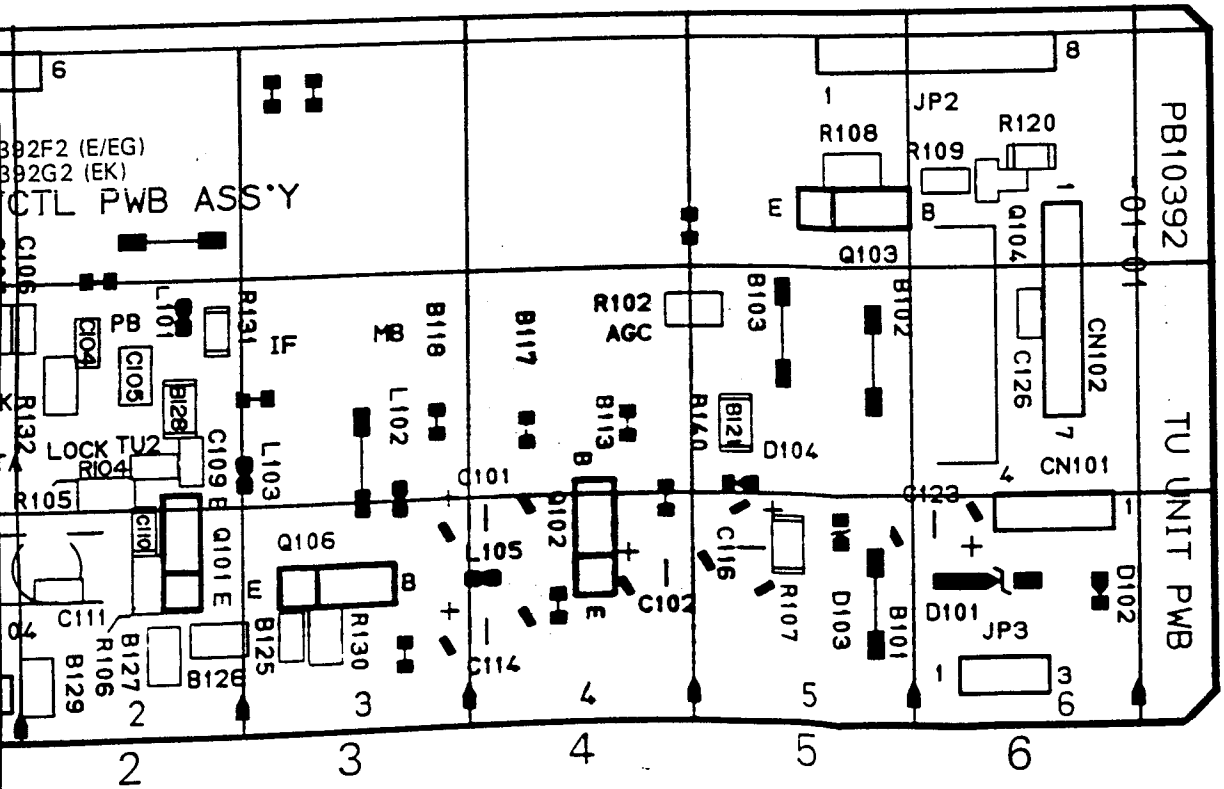
S

—IF—



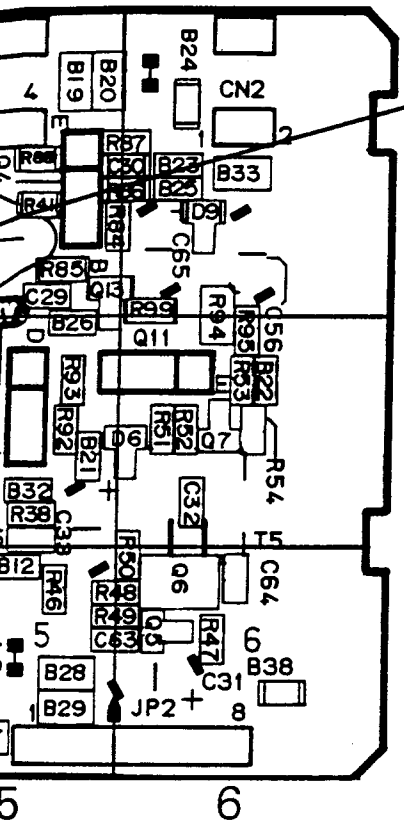
REF No.	LOCATION	REF No.	LOCATIO
TRANSISTOR		RESISTOR	
Q1	B-1	R1	A-1
Q2	B-1	R2	B-1
Q3	A-2	R4	B-1
Q4	C-5	R5	A-1
Q5	A-5	R6	A-1
Q6	A-5	R7	B-1
Q7	B-6	R8	B-1
Q8	C-0	R10	B-1
Q9	C-4	R11	B-1
Q10	C-1	R13	A-3
Q11	B-5	R14	A-1
Q12	B-3	R15	A-1
Q13	C-5	R16	A-2
Q14	C-2	R17	A-3
Q15	A-4	R18	A-3
		R19	A-3
DIODE		R20	A-2
		R21	A-2
D1	A-1	R22	B-2
D4	C-3	R23	B-2
D6	B-5	R24	C-2
D9	C-6	R25	D-2
		R26	C-3
		R27	C-3
		R28	B-3
		R29	C-3
		R30	C-4
		R31	C-3
		R33	C-3
		R34	A-4
		R35	A-3

CTL—



REF No.	LOCATION	REF No.	LOCA
TRANSISTOR		RESISTOR	
Q101	A-2	R103	B
Q102	A-4	R102	B
Q103	C-5	R104	B
Q104	C-5	R105	B
Q106	A-2	R106	A
		R107	A
DIODE		R108	C
		R109	C
D101	A-5	R120	C
D102	A-6	R130	A
D103	A-5	R131	B
D104	B-4	R132	B
		CAPACITO	
		C101	A
		C102	A
		C104	E
		C105	E
		C106	E
		C107	E
		C109	E
		C110	A
		C111	A
		C114	A
		C116	A
		C123	A
		C126	E

2



REF No.	LOCATION
TRANSISTOR	
Q1	B-1
Q2	B-1
Q3	A-2
Q4	C-5
Q5	A-5
Q6	A-5
Q7	B-6
Q8	C-0
Q9	C-4
Q10	C-1
Q11	B-5
Q12	B-3
Q13	C-5
Q14	C-2
Q15	A-4
DIODE	
D1	A-1
D4	C-3
D6	B-5
D9	C-6

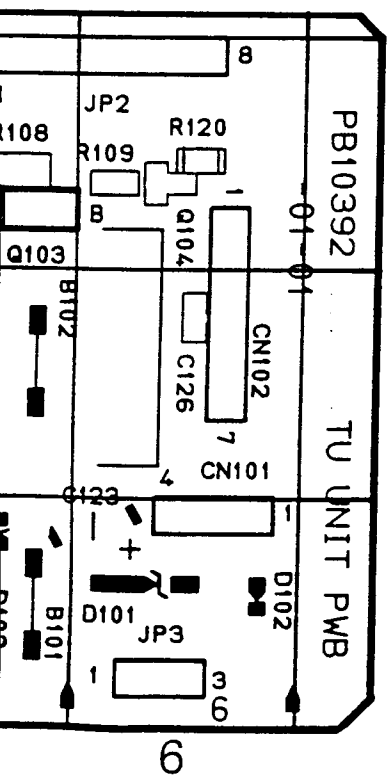
REF No.	LOCATION
RESISTOR	
R1	A-1
R2	B-1
R4	B-1
R5	A-1
R6	A-1
R7	B-1
R8	B-1
R10	B-1
R11	B-1
R13	A-3
R14	A-1
R15	A-1
R16	A-2
R17	A-3
R18	A-3
R19	A-3
R20	A-2
R21	A-2
R22	B-2
R23	B-2
R24	C-2
R25	D-2
R26	C-3
R27	C-3
R28	B-3
R29	C-3
R30	C-4
R31	C-3
R33	C-3
R34	A-4
R35	A-3

REF No.	LOCATION
RESISTOR	
R36	A-4
R37	A-4
R38	B-5
R39	B-5
R40	C-4
R41	C-5
R42	A-4
R45	B-5
R46	A-5
R47	A-6
R48	A-5
R49	A-5
R50	A-5
R51	B-5
R52	B-5
R53	B-6
R54	B-6
R57	A-2
R58	A-3
R62	C-0
R63	C-1
R64	C-1
R65	C-1
R66	C-0
R67	C-1
R70	B-4
R71	C-1
R72	C-1
R73	D-2
R74	D-4
R76	C-2

REF No.	LOCATION
RESISTOR	
R77	B-2
R78	B-2
R79	B-2
R80	B-1
R81	C-4
R82	C-4
R83	C-4
R84	C-5
R85	C-5
R86	C-5
R87	C-5
R88	C-5
R90	D-3
R91	C-3
R92	B-5
R93	B-5
R94	C-6
R95	B-6
R97	B-4
R98	A-2
R99	C-5
CAPACITOR	
CN1	C-4
CN2	C-6
CF1	C-2
CF2	C-3
CF4	C-2
CF6	C-2
CF7	A-3

REF No.	LOCATION
CAPACITOR	
C1	A-1
C2	A-1
C3	A-1
C4	A-1
C5	A-1
C6	B-1
C7	B-1
C8	B-1
C9	B-1
C10	A-2
C11	A-1
C12	A-3
C13	B-3
C14	A-2
C15	B-2
C16	B-3
C17	B-3
C18	C-3
C19	C-3
C20	C-3
C21	C-3
C22	D-4
C23	C-3
C24	B-4
C25	B-3
C26	A-4
C27	A-4
C28	A-4
C29	C-5
C30	C-5
C31	A-5

REF No.	LOCATION
CAPACITOR	
C32	B-5
C33	B-5
C41	C-0
C43	C-1
C44	C-1
C45	C-1
C46	C-2
C50	B-4
C51	C-3
C52	D-3
C56	C-6
C57	B-5
C63	A-5
C64	A-6
C65	C-5
C72	C-1
C73	C-1

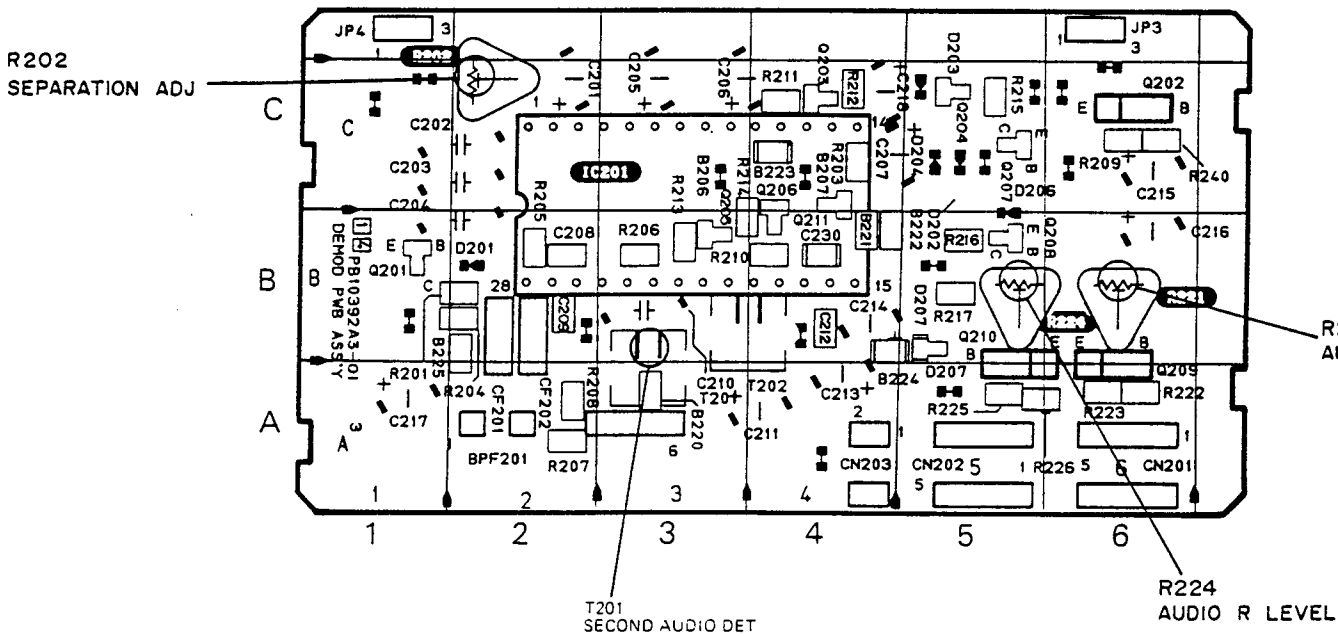


REF No.	LOCATION
TRANSISTOR	
Q101	A-2
Q102	A-4
Q103	C-5
Q104	C-5
Q106	A-2
DIODE	
D101	A-5
D102	A-6
D103	A-5
D104	B-4

REF No.	LOCATION
RESISTOR	
R103	B-1
R102	B-4
R104	B-2
R105	B-1
R106	A-2
R107	A-4
R108	C-5
R109	C-5
R120	C-6
R130	A-2
R131	B-2
R132	B-1
CAPACITOR	
C101	A-3
C102	A-4
C104	B-1
C105	B-2
C106	B-1
C107	B-1
C109	B-2
C110	A-2
C111	A-1
C114	A-3
C116	A-4
C123	A-5
C126	B-6

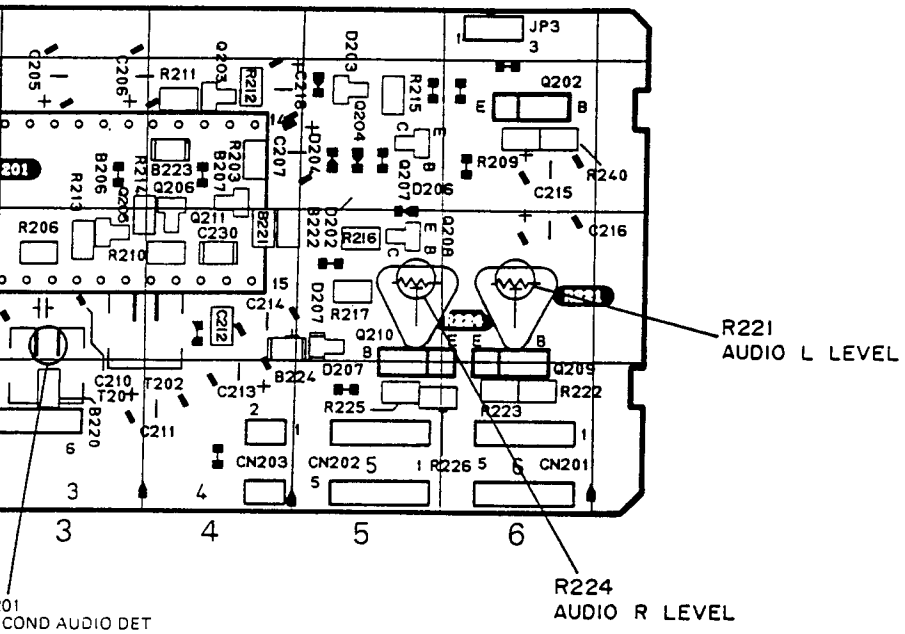
3.36 DEMODULATOR CIRCUIT BOARD

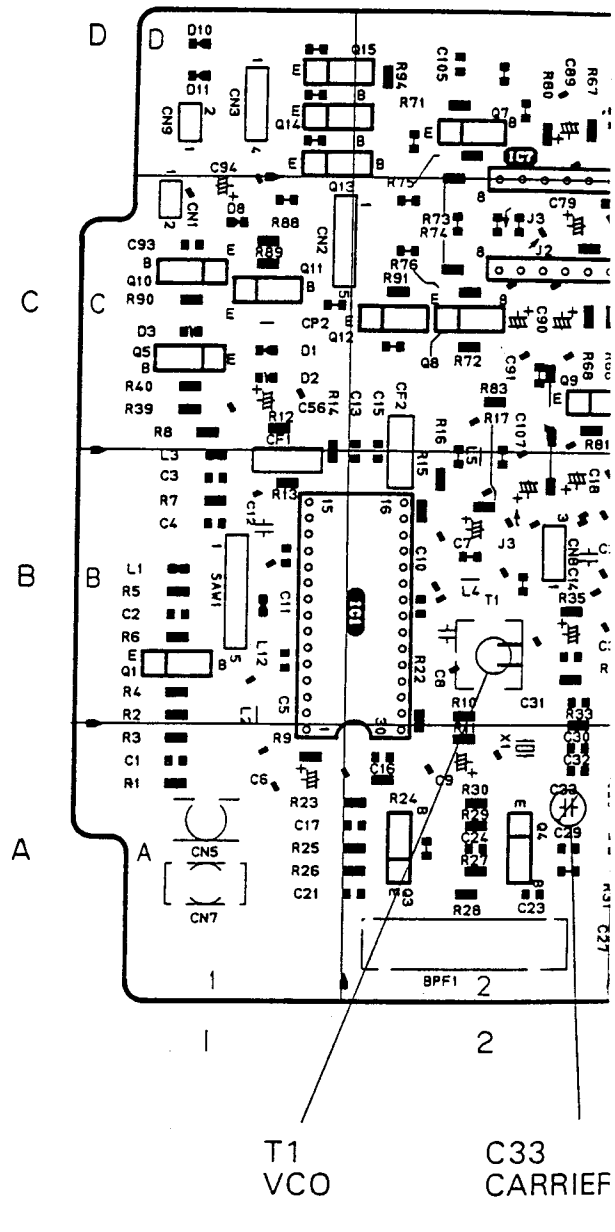
—E/EG Only—



REF No.	LOCATION	REF No.	LOCATION	REF No.	LOCATION
TRANSISTOR		RESISTOR		CAPACITOR	
Q20	C-4	R201	B-1	C201	C-2
Q201	B-1	R202	D-1	C202	C-1
Q202	C-5	R203	C-4	C203	C-1
Q203	C-3	R204	B-1	C204	B-1
Q205	B-3	R205	B-2	C205	C-2
Q206	B-3	R206	B-2	C206	C-3
Q207	C-5	R207	A-2	C207	C-4
Q208	B-5	R208	A-2	C208	B-2
Q209	A-5	R209	C-6	C209	B-2
Q210	A-5	R210	B-3	C210	B-2
Q211	C-4	R211	C-3	C211	A-3
		R212	C-4	C212	B-4
DIODE		R213	B-3	C213	A-4
		R214	B-3	C214	B-4
D201	B-1	R215	C-5	C215	C-6
D202	C-4	R216	B-4	C216	B-6
D203	C-4	R217	B-4	C217	A-1
D204	C-4	R221	B-6	C218	C-4
D206	B-5	R222	A-6	C230	B-3
D207	B-4	R223	A-5		
D207	B-4	R224	B-5		
		R225	A-5		
		R226	A-5		
		R240	C-6		

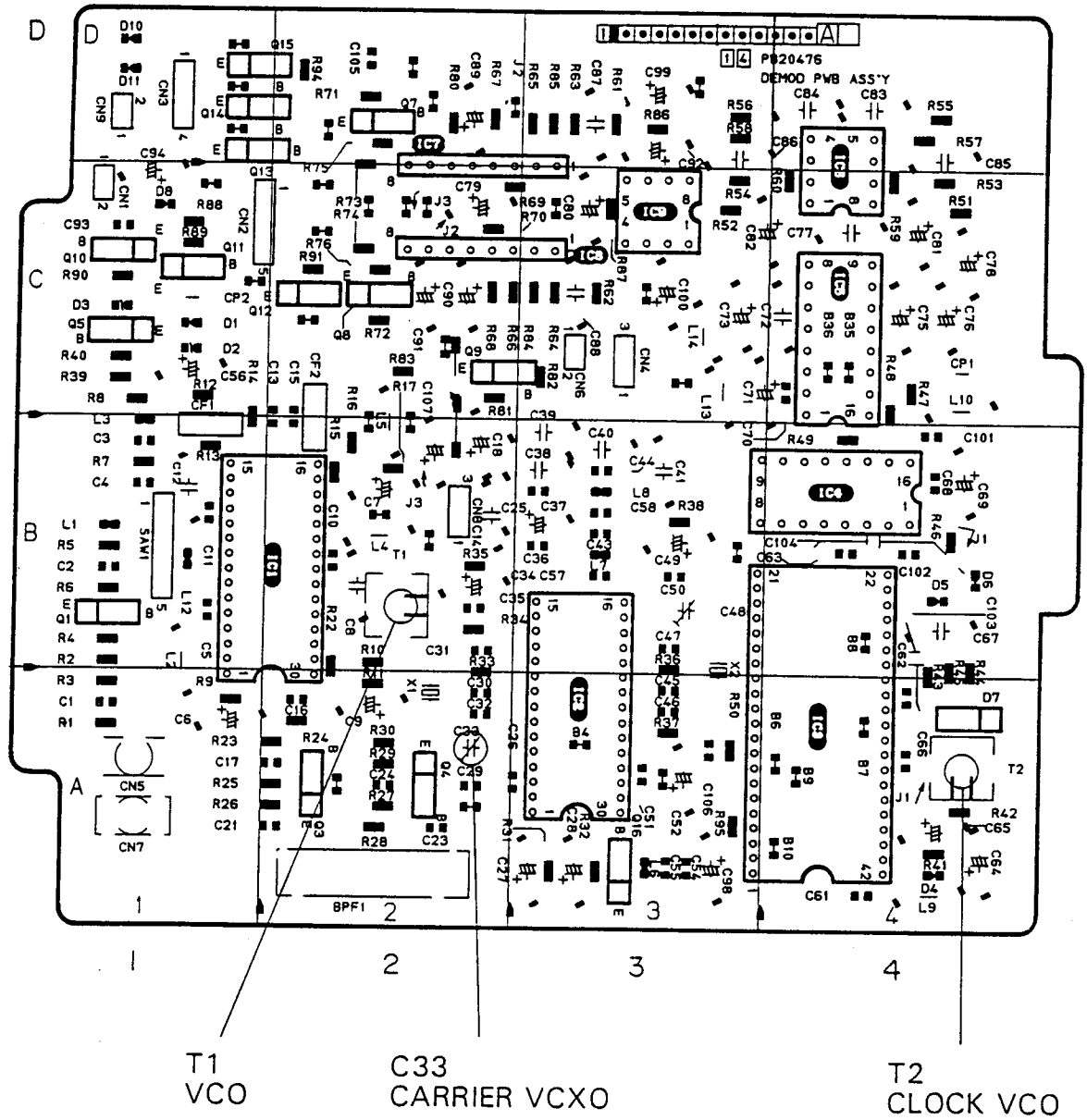
—EK Only—





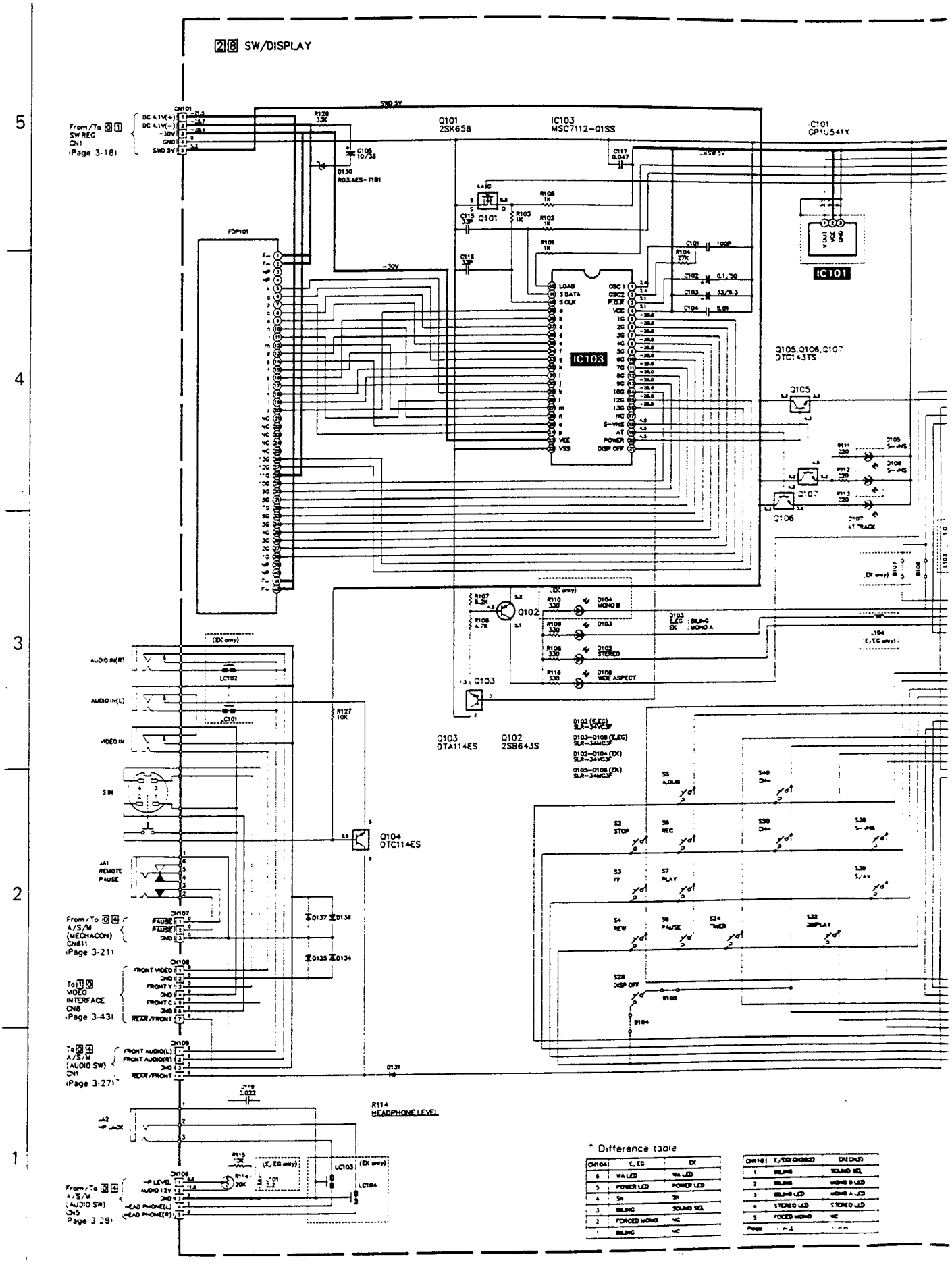
LOCATION	REF No.	LOCATION	REF No.	LOCATION
ANSISTOR	RESISTOR		CAPACITOR	
C-4	R201	B-1	C201	C-2
B-1	R202	D-1	C202	C-1
C-5	R203	C-4	C203	C-1
C-3	R204	B-1	C204	B-1
B-3	R205	B-2	C205	C-2
B-3	R206	B-2	C206	C-3
C-5	R207	A-2	C207	C-4
B-5	R208	A-2	C208	B-2
A-5	R209	C-6	C209	B-2
A-5	R210	B-3	C210	B-2
C-4	R211	C-3	C211	A-3
	R212	C-4	C212	B-4
IODE	R213	B-3	C213	A-4
	R214	B-3	C214	B-4
B-1	R215	C-5	C215	C-6
C-4	R216	B-4	C216	B-6
C-4	R217	B-4	C217	A-1
C-4	R221	B-6	C218	C-4
B-5	R222	A-6	C230	B-3
B-4	R223	A-5		
B-4	R224	B-5		
	R225	A-5		
	R226	A-5		
	R240	C-6		

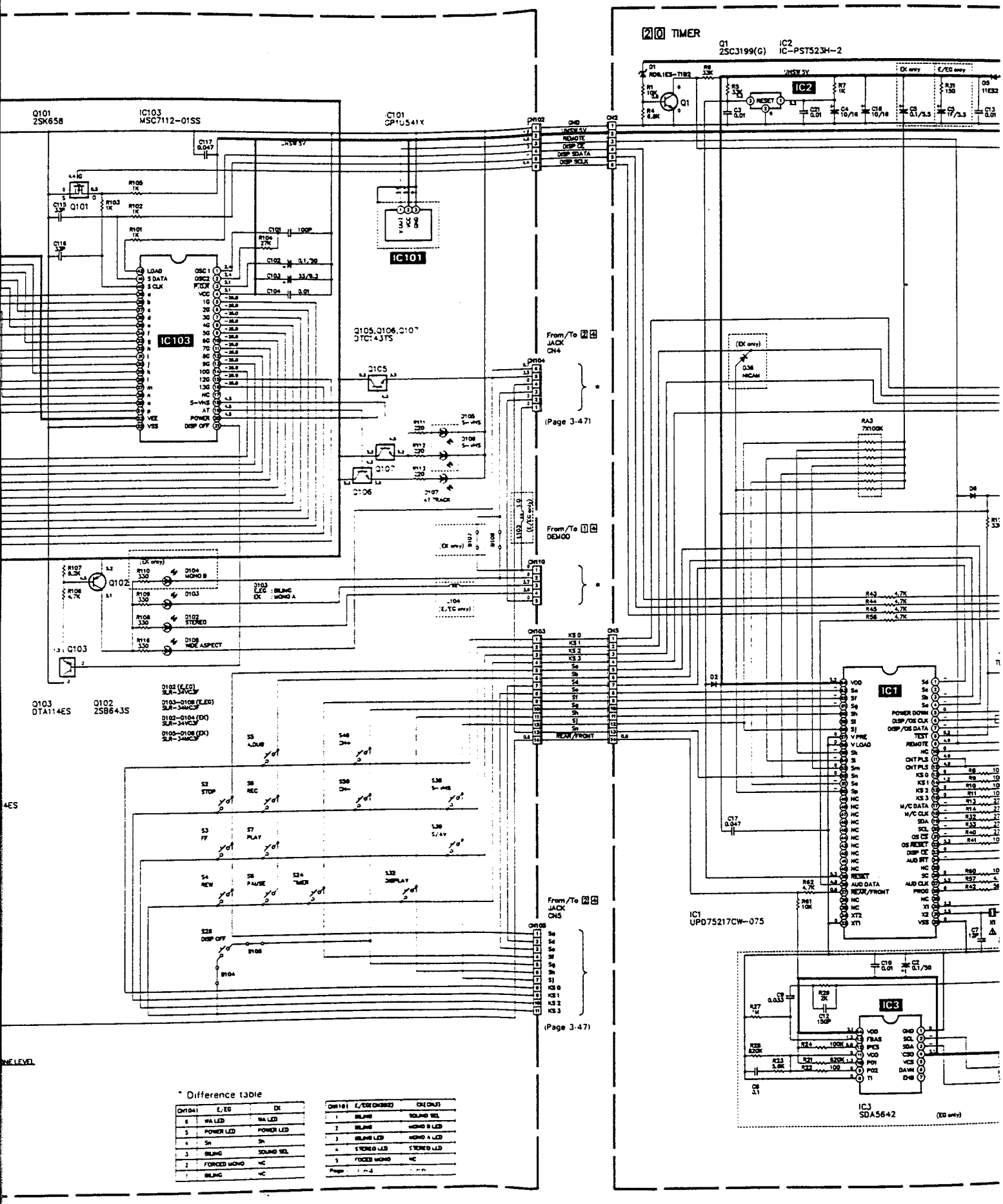
—EK Only—

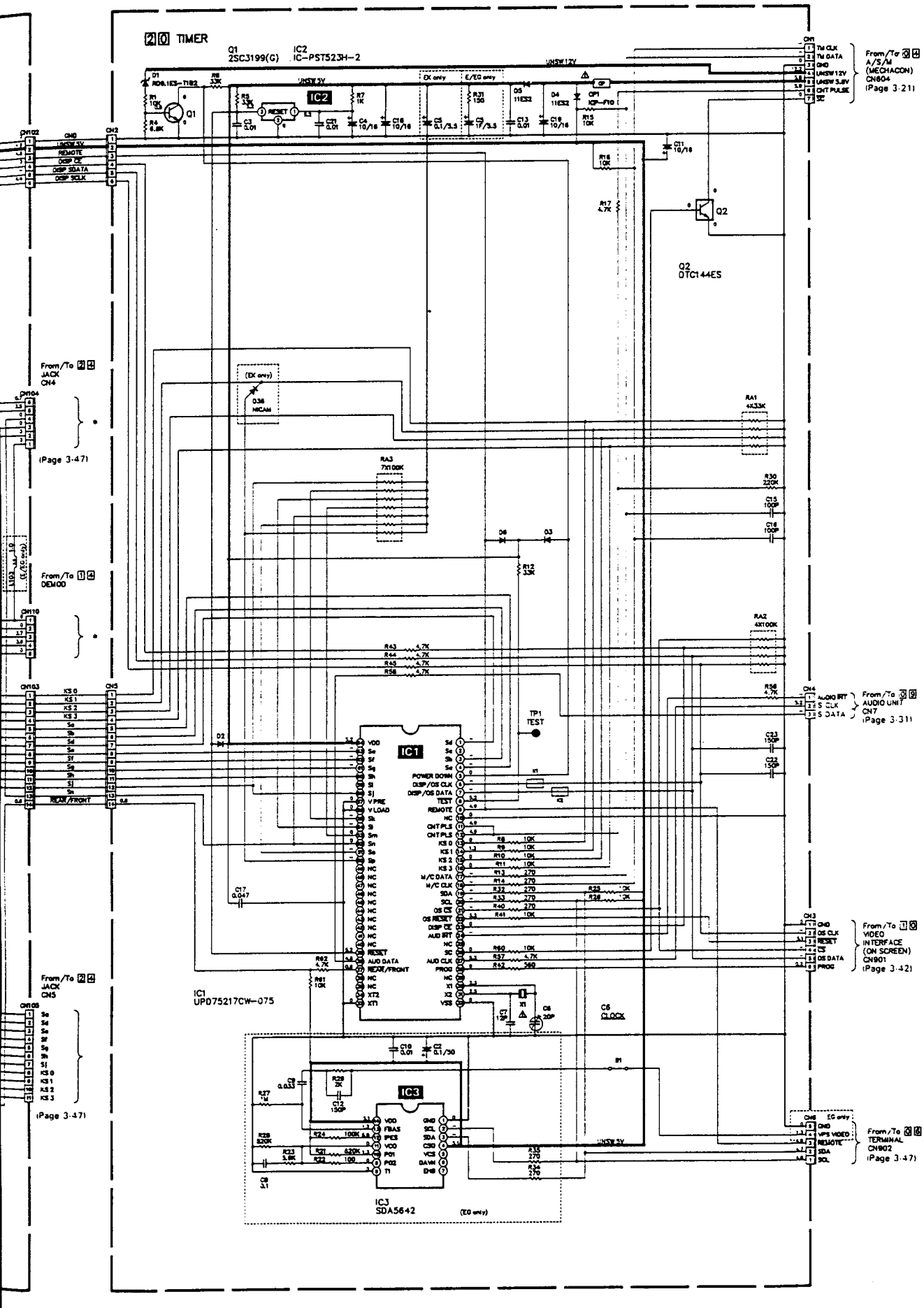


L LEVEL

3.37 TIMER & SW/DISPLAY SCHEMATIC DIAGRAMS

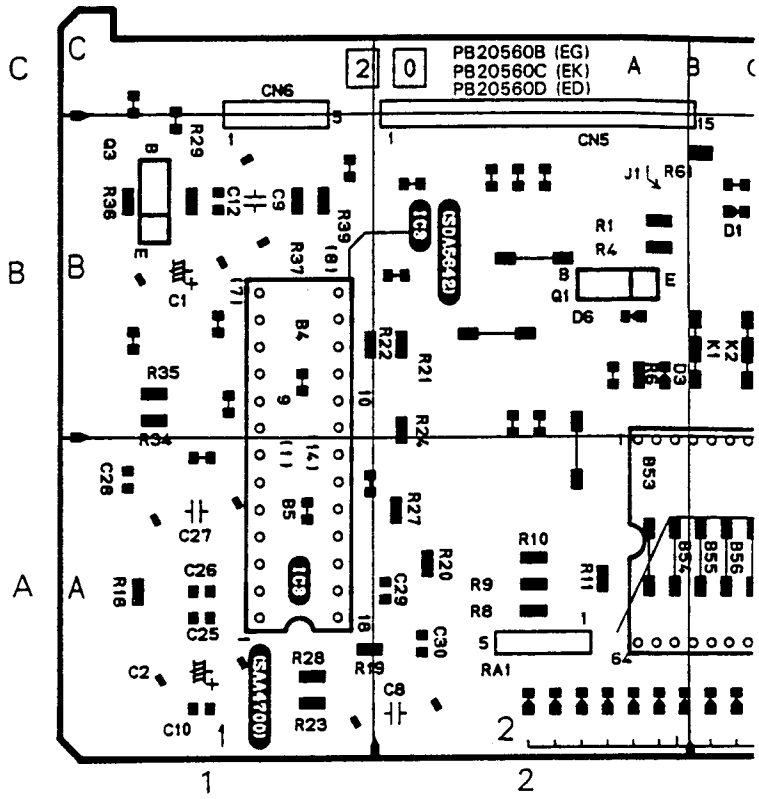



20 TIMER
Q1
2SC3199(G)
IC2
IC-PST523H-2
Q101
2SK658
IC103
MSC7112-01SS
C101
CPTU541X
IC101
IC103
Q105,Q106,Q107
DTC143TS
From/To 2
JACK
CN4
(Page 3-47)
From/To 1
DEM00
From/To 2
JACK
CN5
(Page 3-47)
Q102
Q103
DTA114ES
Q102
2SB643S
IC1
UPD75217CW-075
IC3
SDA5642
(EX only)
(E/EC only)
* Difference table

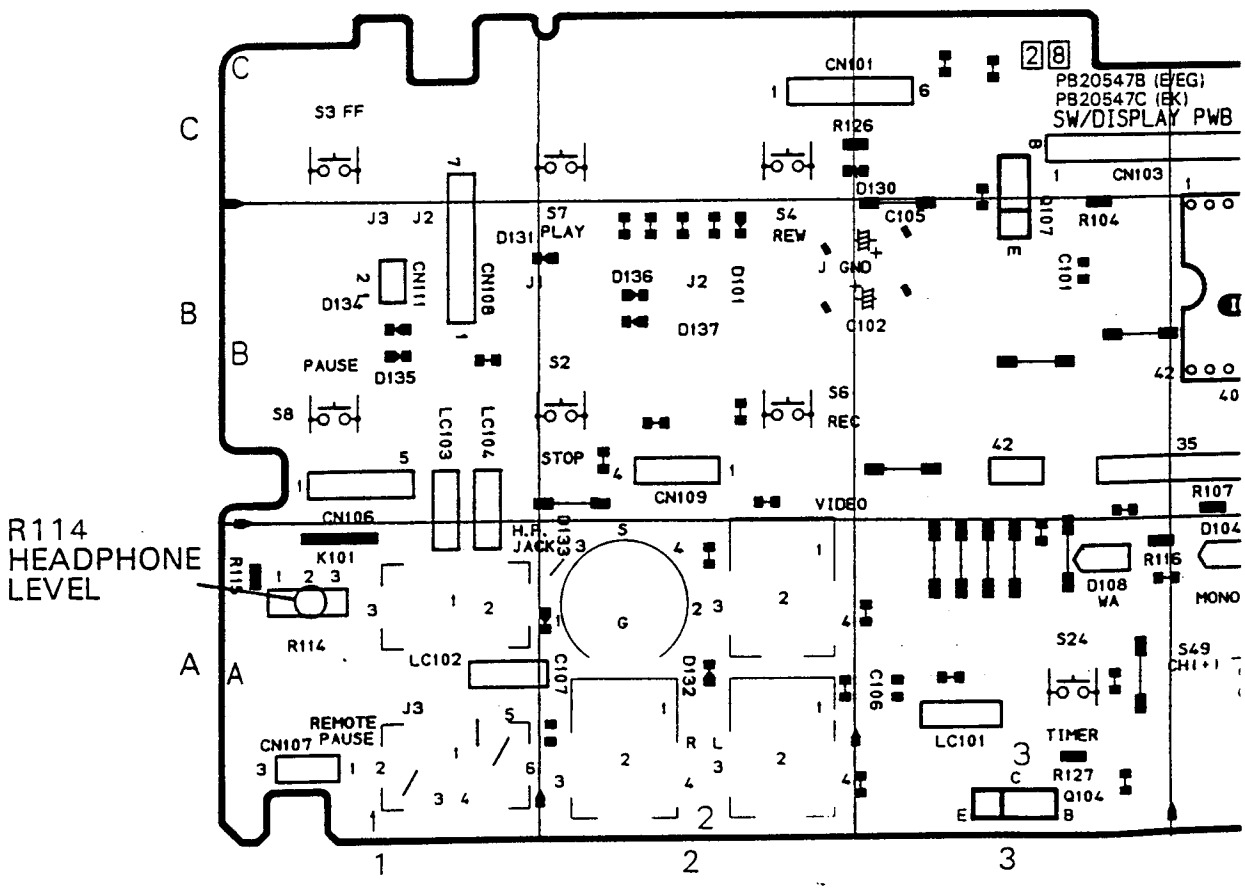

20 TIMER
Q1
2SC3199(G)
IC2
IC-PST523H-2
IC2
Q1
Q2
DTC144ES
IC1
UPD75217CW-075
IC3
SDA5642
(EG only)
(EX only)
EX only
E/EG only
From/To 20 24
A/S/M
(MECHACON)
CN604
(Page 3-21)
From/To 20 24
JACK
CN4
(Page 3-47)
From/To 10 24
DEMOD
From/To 20 24
JACK
CN5
(Page 3-47)
From/To 20 24
AUDIO UNIT
CN7
(Page 3-31)
From/To 10 20
VIDEO
INTERFACE
(ON SCREEN)
CN901
(Page 3-42)
From/To 20 26
TERMINAL
CN902
(Page 3-47)
TP1
TEST
CLOCK
REAR/FRONT
RESET
REMOTE
POWER DOWN
DISP/OS CLK
DISP/OS DATA
TEST
CNT PLS
M/C DATA
M/C CLK
SDA
SCL
OS RESET
DISP CE
AUD RST
AUD DATA
AUD CLK
PROG
VPRE
VLOAD
VDD
XT1
XT2
VSS
RESET
GND
UNSW 5V
UNSW 12V
REMOTE
DISP SDA
DISP SCLK
TM CLK
TM DATA
CNT PULSE
VCT
AUDIO RST
S CLK
S DATA
OS CLK
OS DATA
PROG
VPS VIDEO
SDA
SCL

3.38 TIMER & SW/DISPLAY CIRCUIT BOARDS

—TIMER—

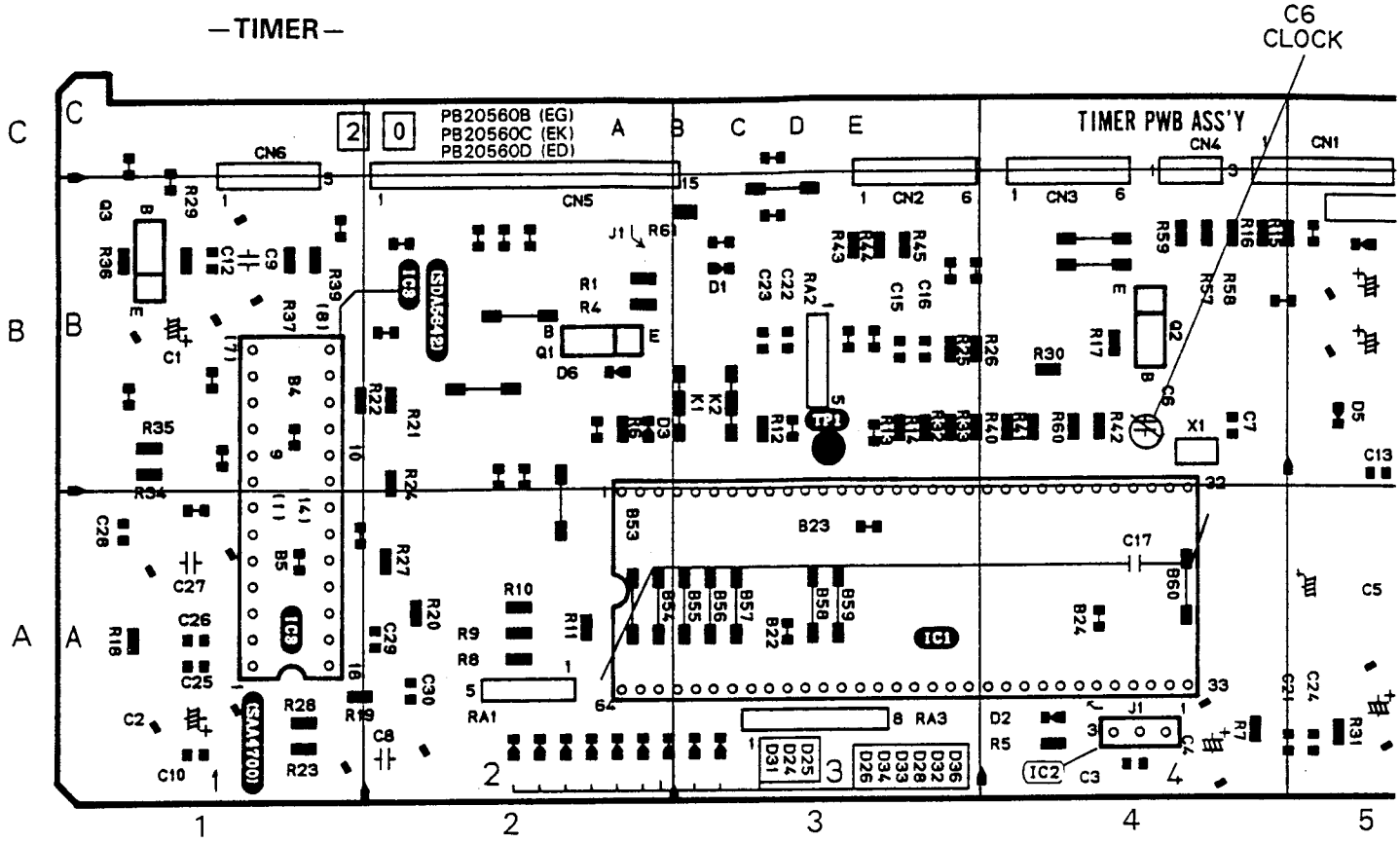


—SW/DISPLAY—

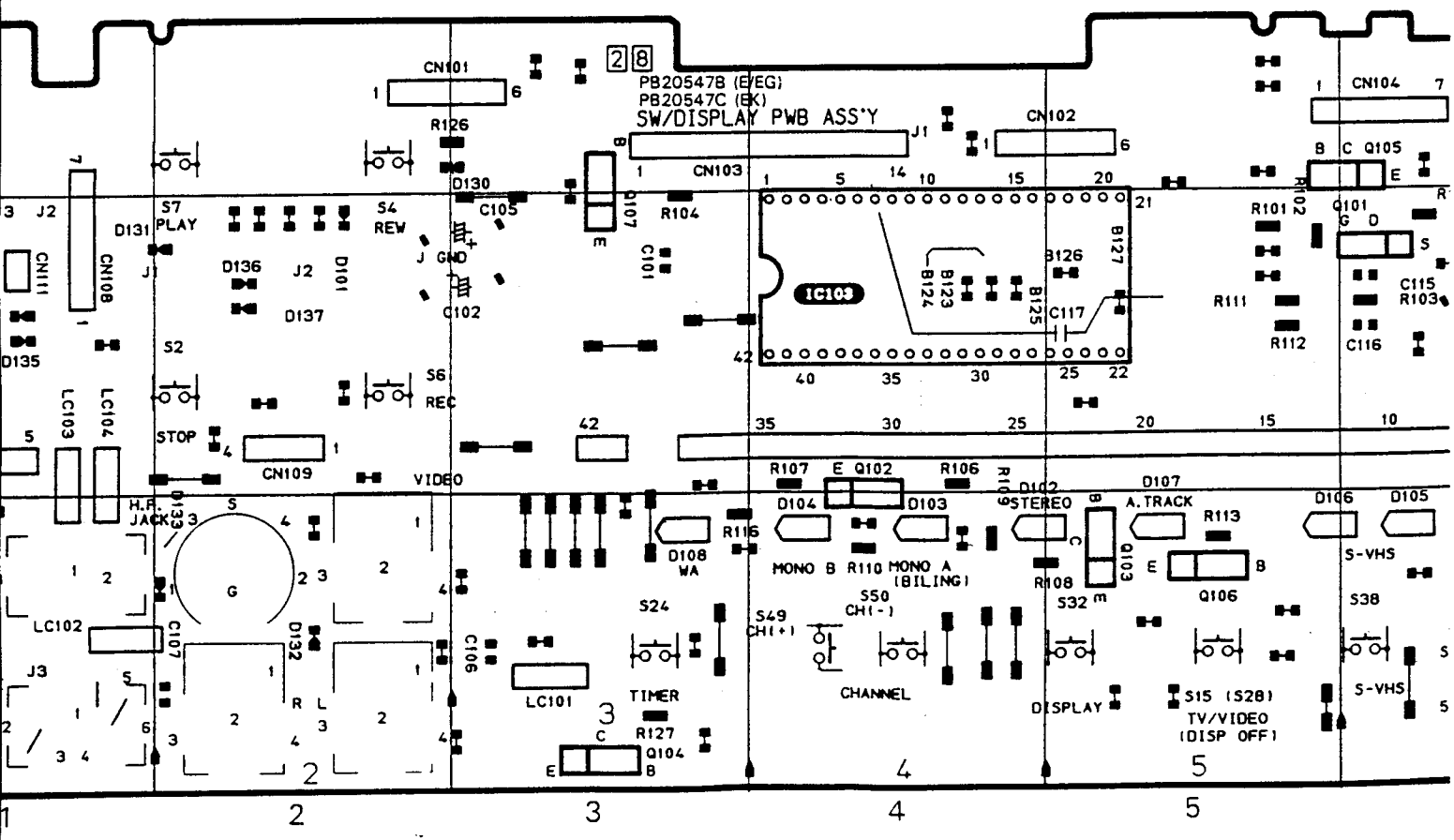


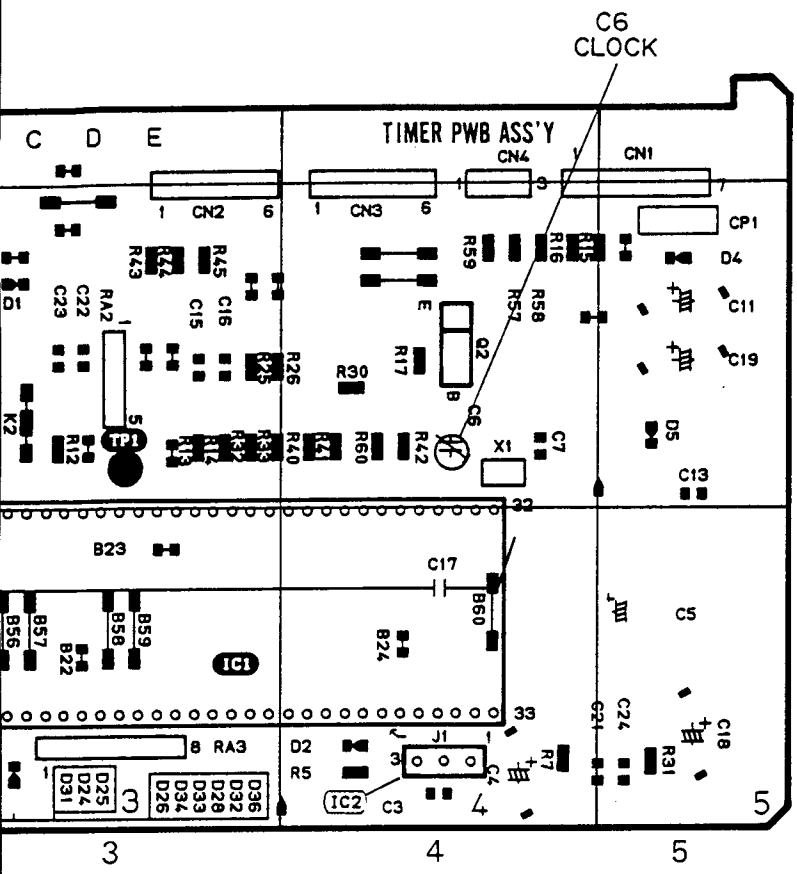
T BOARDS

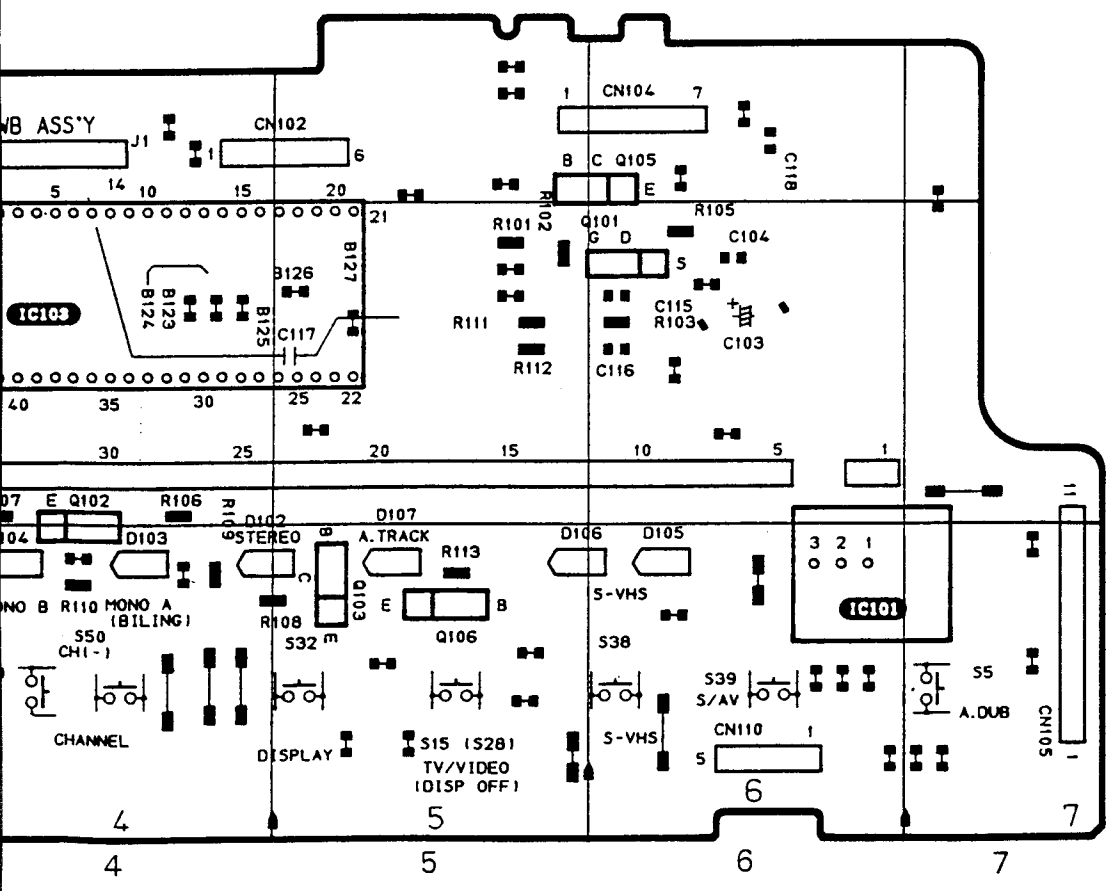
—TIMER—



SW/DISPLAY—

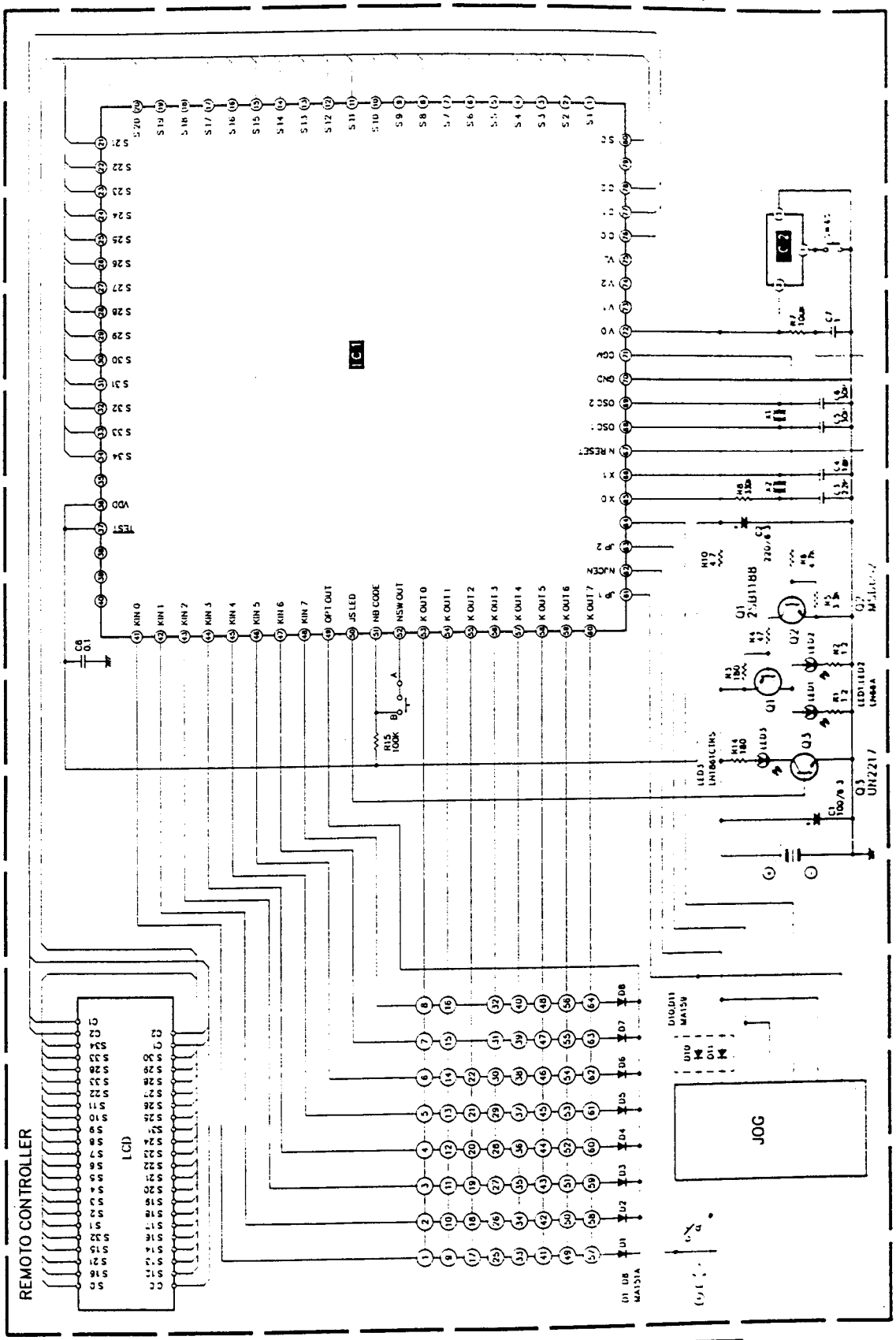



C6
CLOCK
TIMER PWB ASS'Y
CN4
CN1
CN2
CN3
CP1
D4
C11
C19
C13
C17
C5
C18
R7
C4
R31
C3
IC1
IC2
RA3
TP1
X1
Q2
C7
R59
R16
R52
R58
R17
R30
R26
R40
R60
R42
B23
B24
J1
D2
R5
C21
C24
3
4
5


CN104
CN102
Q105
C118
R105
R101
Q101
C104
R102
R111
C115
R103
C103
R112
C116
IC103
B126
B127
B123
B124
B125
C117
Q102
R106
D103
D102
STEREO
D107
A.TRACK
R113
D106
D105
S-VHS
Q103
Q106
R110
MONO A
(BILING)
R108
S32
S38
IC101
S50
CH(-)
CHANNEL
DISPLAY
S15 (S28)
TV/VIDEO
(DISP OFF)
S39
S/AV
S5
A.DUB
CN110
CN105
4
5
6
7

3.39 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.

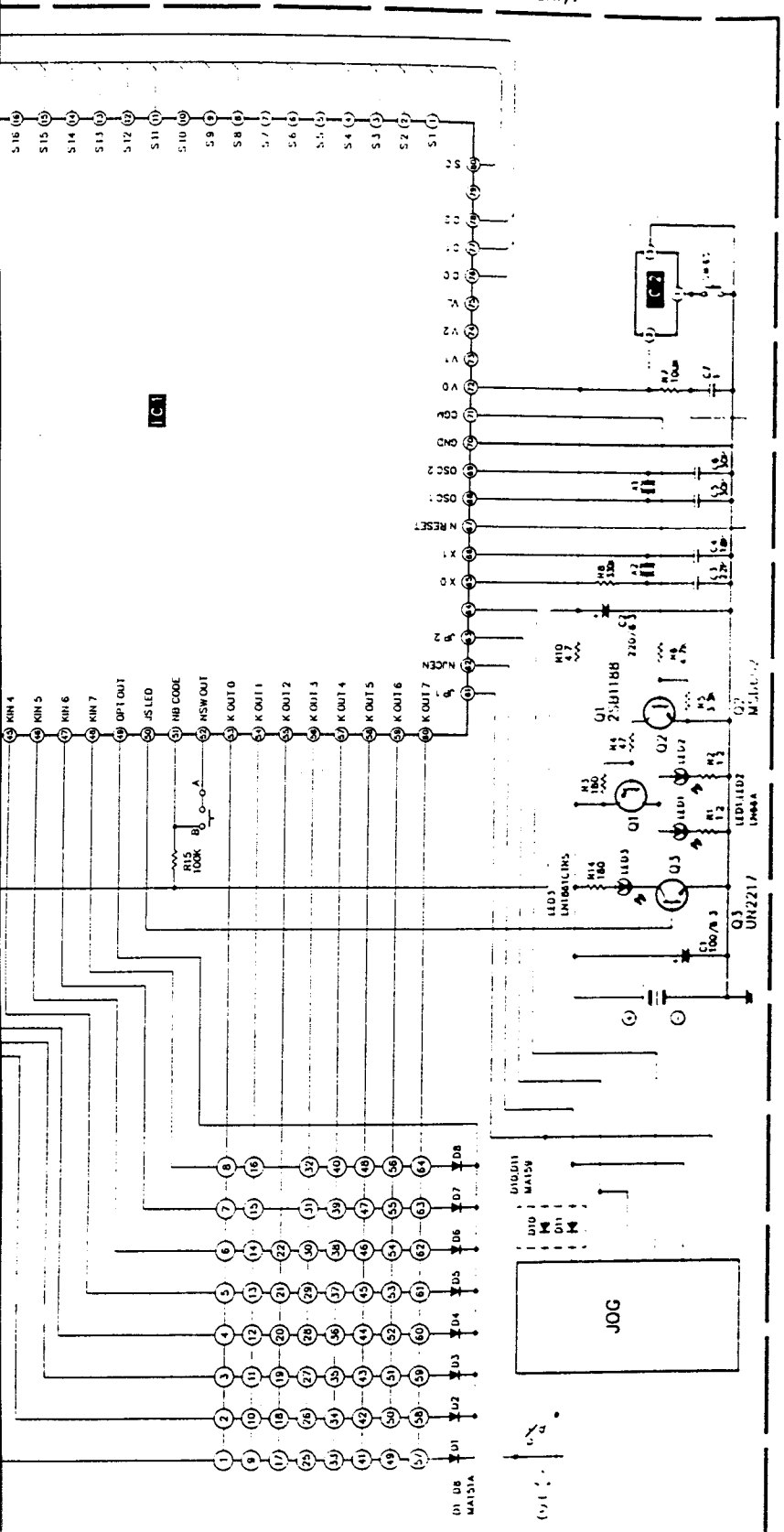


Key No.	Key NAME
1	TV STANDBY
2	TV AUDIO
3	TV PROG ^
4	TV PROG v
5	TV VOL +
6	TV VOL -
7	0
8	1
9	2
10	3
11	4
12	5
13	6
14	7
15	8
16	9
17	MARK
18	ERASE
19	A/B CODE
20	TV CODE
21	TRANS
22	CLOCK ADJ.
23	
24	
25	REC
26	EDIT MODE
27	EDIT STANDBY
28	EDIT START
29	JOG/SHUTTLE
30	VPS
31	SEL +
32	SEL -
33	DISPAY
34	OPERATE
35	EJECT
36	INDEX
37	INTRO
38	SKIP/SEARCH
39	V. SEARCH <<
40	PAUSE
41	V. SEARCH >>
42	REW
43	PLAY
44	F.F.
45	STOP
46	TV/VTR
47	TIMER
48	TIMER PAGE
49	CANC
50	PROG/E
51	MENU/TEXT
52	SOUND MENU
53	LARGE/NORMAL
54	SELECT
55	OSD
56	SCENE CTL
57	C. MEMORY
58	C. RESET
59	CH ^
60	CH v
61	Z RETURN
62	L. SELECT
63	A. TRACKING

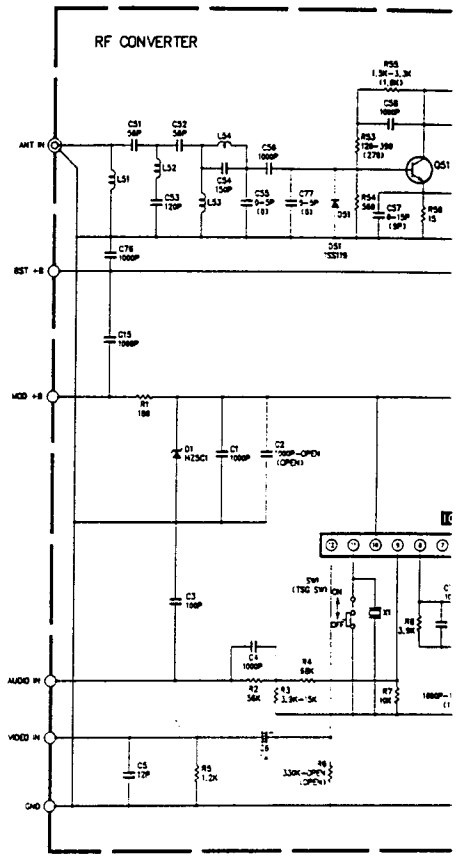
SCHEMATIC DIAGRAM

NOTES:

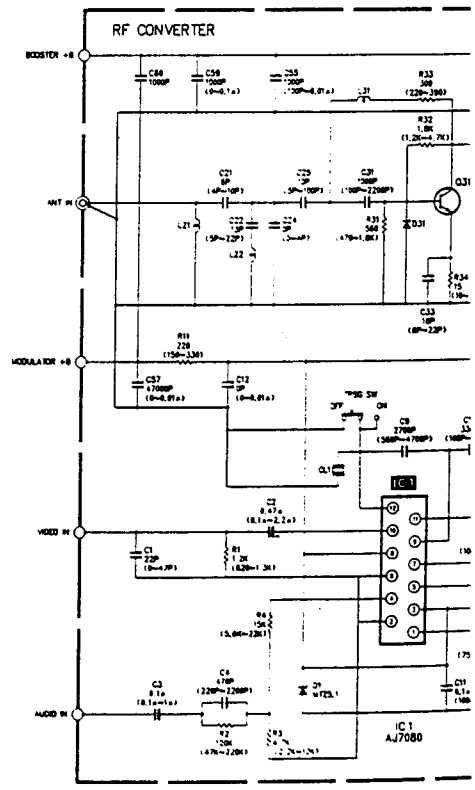
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.



3.40 RF CONVERTER SCHEMATIC (E/EG)

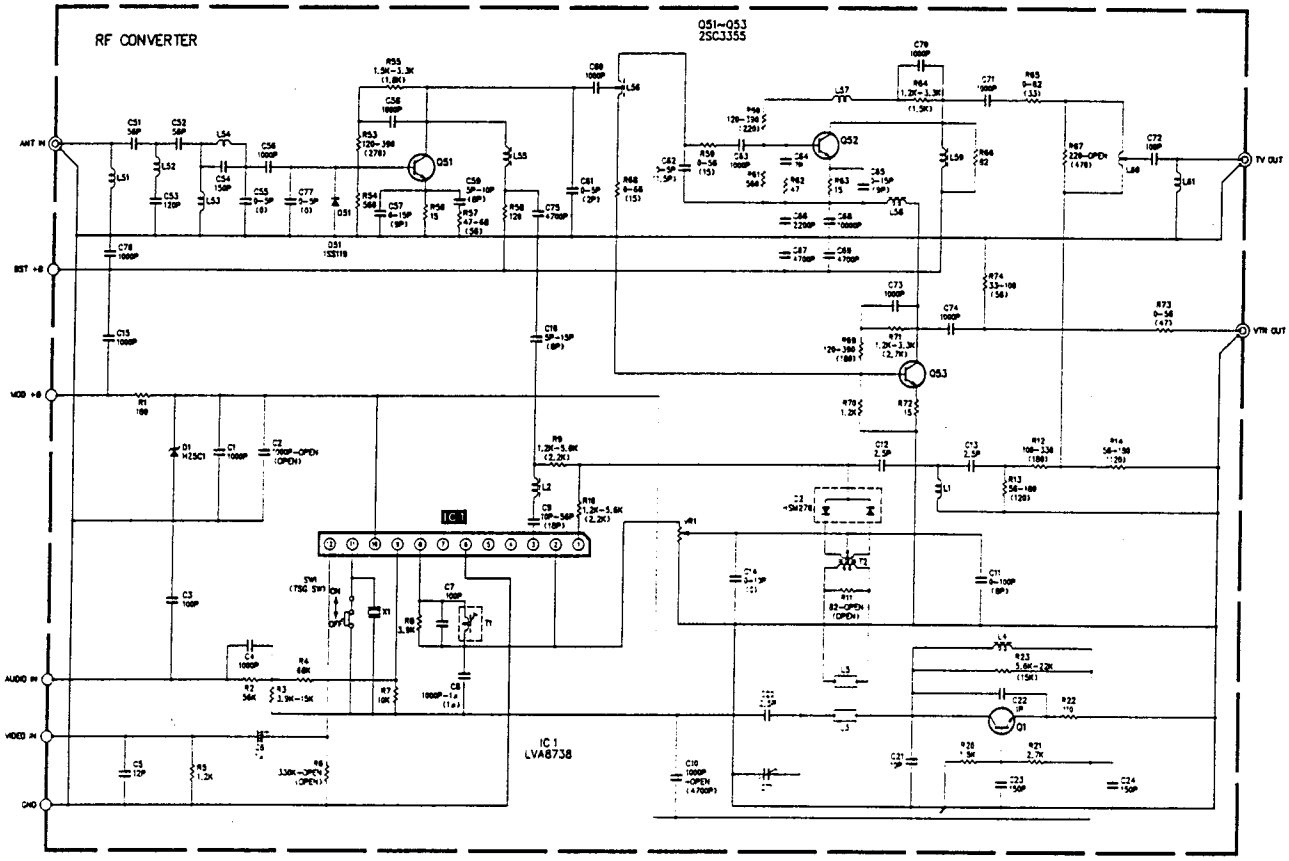


3.41 RF CONVERTER & MIX BOOS SCHEMATIC DIAGRAM



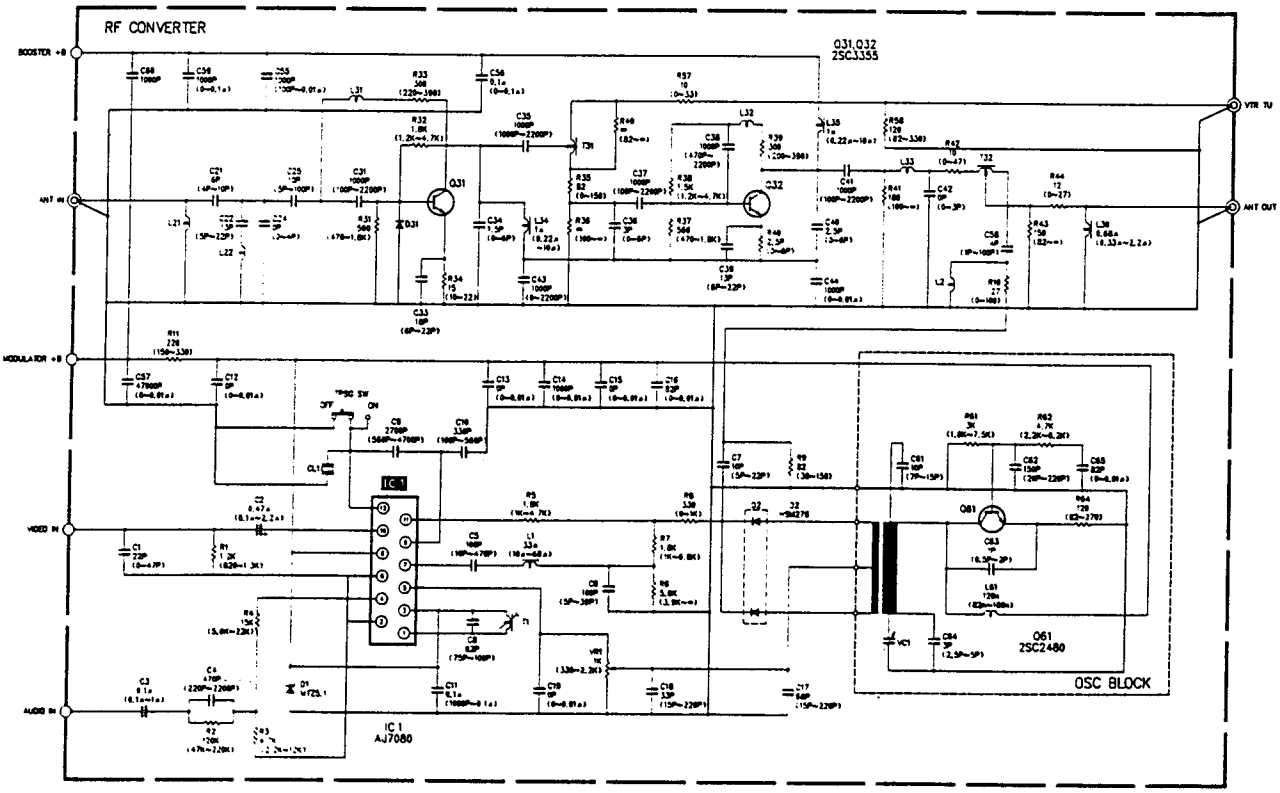
3.40 RF CONVERTER SCHEMATIC DIAGRAM (E/EG)

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.



3.41 RF CONVERTER & MIX BOOSTER SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.



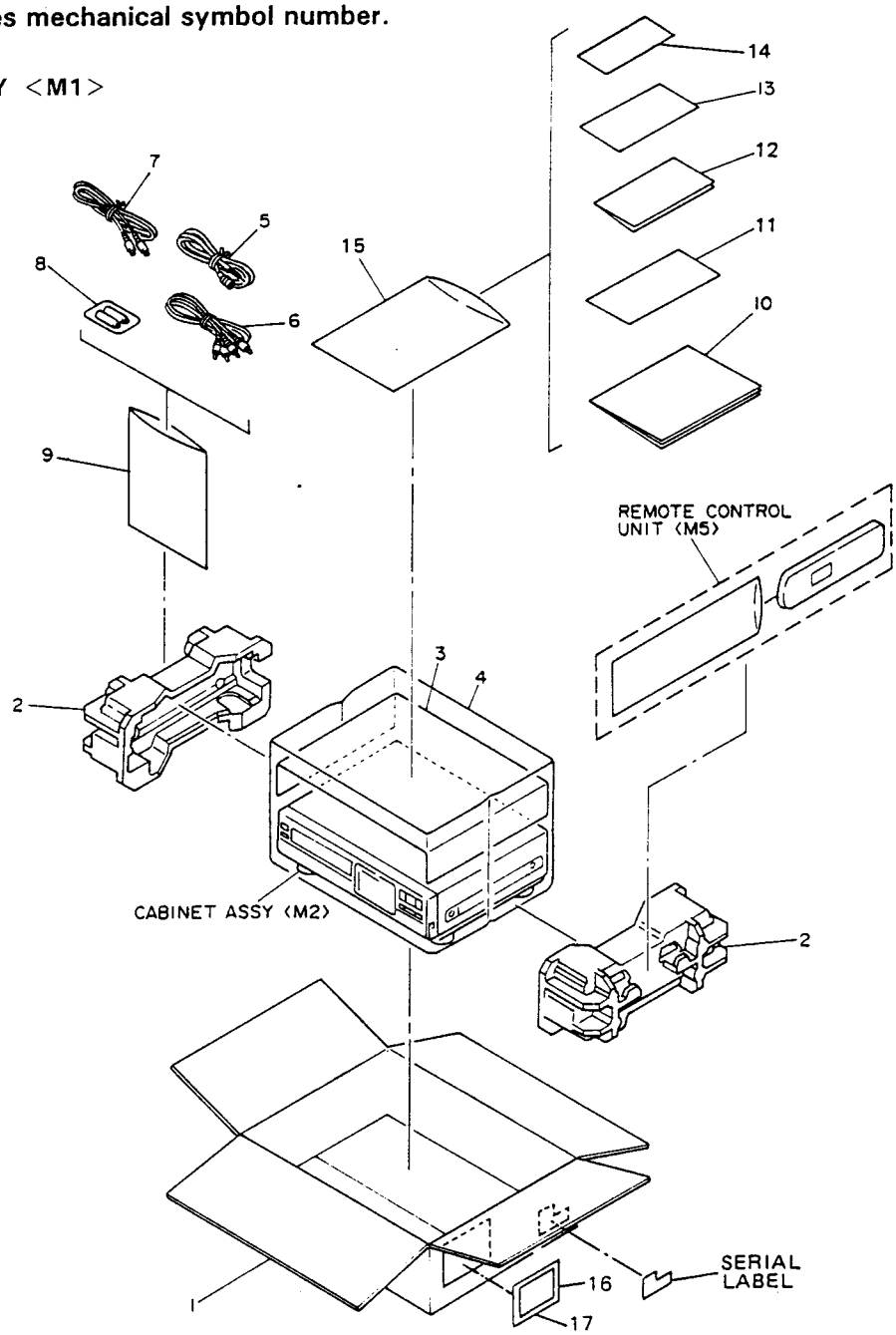
SECTION 4
EXPLODED VIEWS AND PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety.Replace only with specified part numbers.

NOTE:<M >indicates mechanical symbol number.

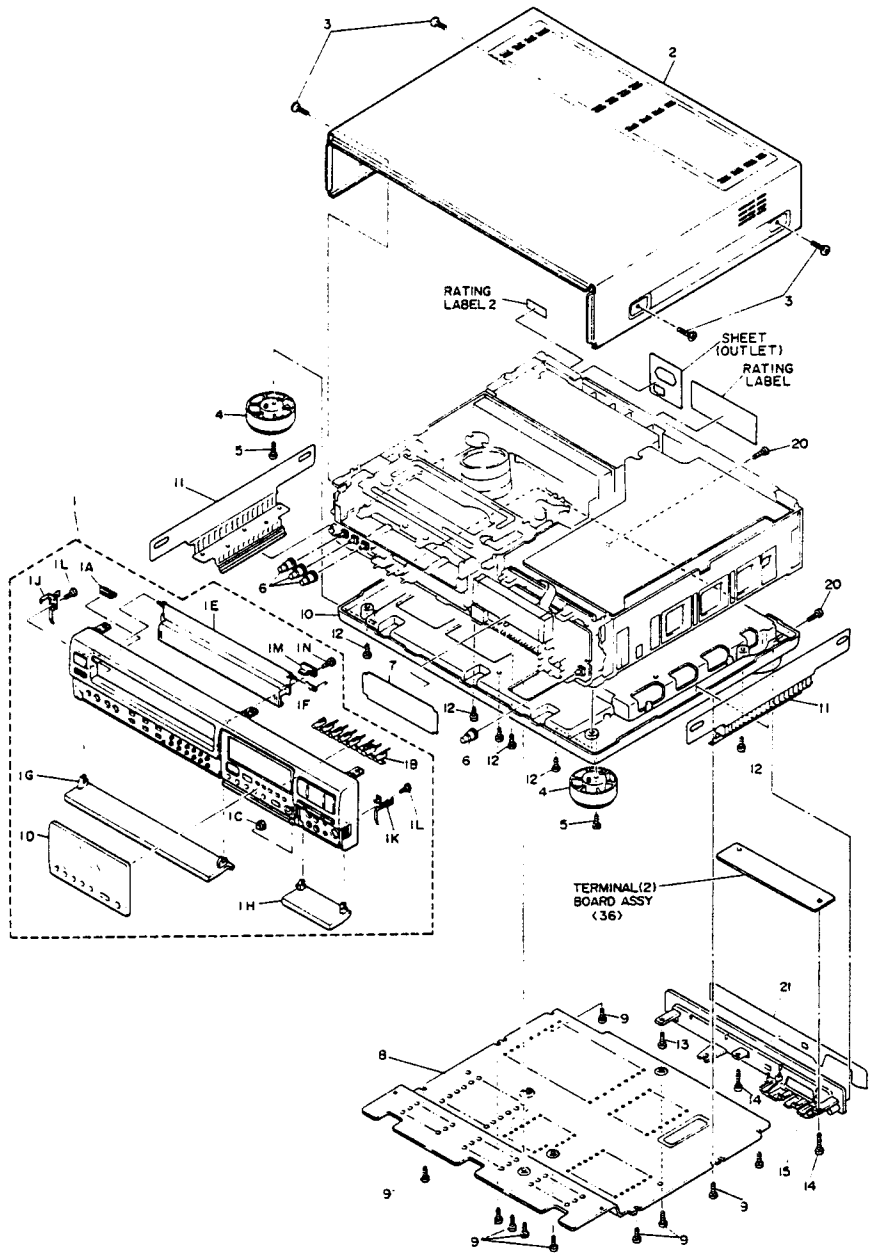
4.1 PACKING ASSEMBLY <M1>



PACKING ASSEMBLY <M1>

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	1	PQ33917-4-4	PACKING CASE, E
		PQ33917-2-5	PACKING CASE, EG
		PQ33917-3-5	PACKING CASE, EK
	2	PQ33882A	CUSHION ASSY
	3	PQ41026-21	PROTECT SHEET
	4	PQM30021-82	POLY BAG, E/EG
		PQM30045-33	POLY BAG, EK
	5	PU59168-3	RF CABLE, AERIAL CABLE
	or	PU59167-3	RF CABLE, AERIAL CABLE
	6	PU56142-5	PIN CORD ASSY, AUDIO CABLE
	or	PU56142-3	PIN CORD ASSY, AUDIO CABLE
	7	PU60111	DIN CORD, S-VIDEO CABLE
	or	PU61113	MINI DIN CABLE, S-VIDEO CABLE
	8	UM-3DJ2P	BATTERY, X2, "R6"
	9	PQM30023-8	POLY BAG
		QPGA020-02005	POLY BAG, E/EG
⚠	10	PU30425-1269	INSTRUCTIONS, EK
⚠		PU30425-1228	INSTRUCTIONS, E/EG
	11	TCN-3379	TAPE CATALOG
	12	PU61342-2	INST SHEET(RCU), EG
	13	BT-20060	GUARANTY CARD, EK
	14	BT-20066A	E.DISTRI.LIST, EK
	15	PQM30023-5	POLY BAG, EK
		QPGA025-03505	POLY BAG, E/EG
	16	BT-20114	WARRANTY CARD, EG
	17	PQ33909	POLY BAG, EG

4.2 CABINET ASSEMBLY <M2>



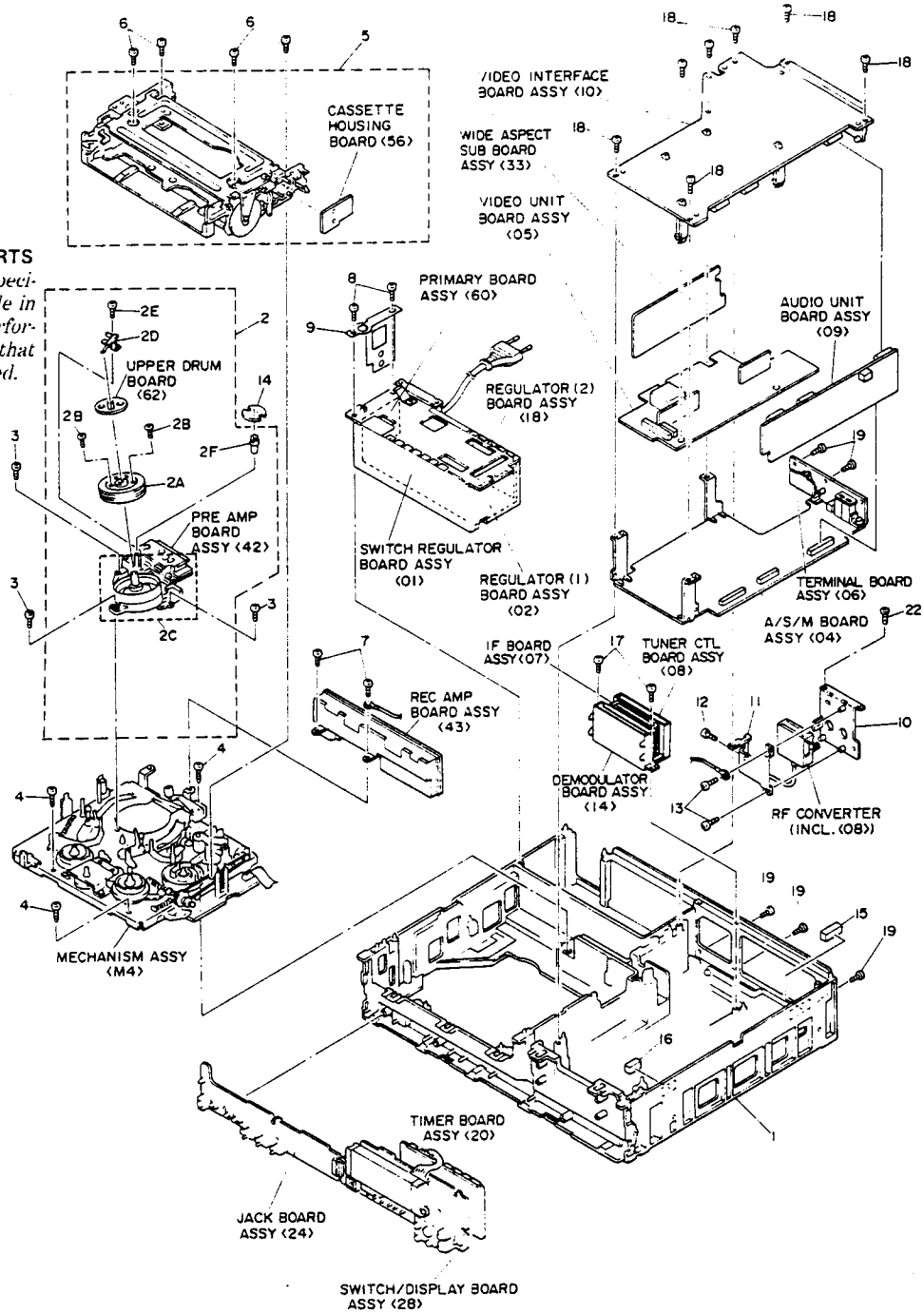
CABINET ASSEMBLY <M2>

!	REF.No	PART No.	PART NAME,DESCRIPTION
	1	PQ11270E-9	FRONT PANEL ASSY, EK
		PQ11270D-9	FRONT PANEL ASSY, E
		PQ11270B-9	FRONT PANEL ASSY, EG
	1A	PQ33846-1-2	INDICATOR
	1B	PQ33879-1-1	BUTTON
	1C	PQ45177	CAP(3)
	1D	PQ33878-2-3	WINDOW, E/EG
!		PQ33878-4-3	WINDOW, EK
	1E	PQ21252-1-4	CASSETTE HOUSING DOOR
	1F	PQ45691	TORSION SPRING
	1G	PQ33866H-4	DOOR(1) ASSY, E
		PQ33866J-4	DOOR(1) ASSY, EK
		PQ33866F-4	DOOR(1) ASSY, EG
	1H	PQ33867F	DOOR(2) ASSY
	1J	PQ45170-1-1	SPRING(L)
	1K	PQ45171-1-1	SPRING(R)
	1L	SDSF2605Z	SCREW, X2
	1M	PQ45203	BRACKET
	1N	SDSF2005Z	SCREW
!	2	PQ11011-6	TOP COVER
	3	PQ43827	SPECIAL SCREW, X4, FOR T COVER
	4	PQ43945A	FOOT ASSY, X2
	5	SDSF3010Z	SCREW, X2, FOR FOOT
	6	PQ43888-2	KNOB(VOLUME), X4
	7	PQ45254	FILTER(FDP)
!	8	PQ11150-2	BOTTOM COVER
	9	SDSF3010Z	SCREW, X10, FOR BOTTOM COVER
!	10	PQ11149-1-4	COVER(CHASSIS)
	11	PQ21242-1-1	BRACKET(EARTH), X2, FOR COVER
	12	SDSF3010Z	SCREW, X6, FOR COVER
	13	SDSF3012Z	SCREW
	14	SDSF3016M	SCREW, X2, FOR TERMINAL BOARD
!	15	PQ11238	TERMINAL BOARD, S.P.
	20	SDSF3010M	SCREW, X2, FOR REAR
	21	PQ33948-2	SHEET(T.BOARD)

4.3 CHASSIS ASSEMBLY <M3>

BEWARE OF BOGUS PARTS

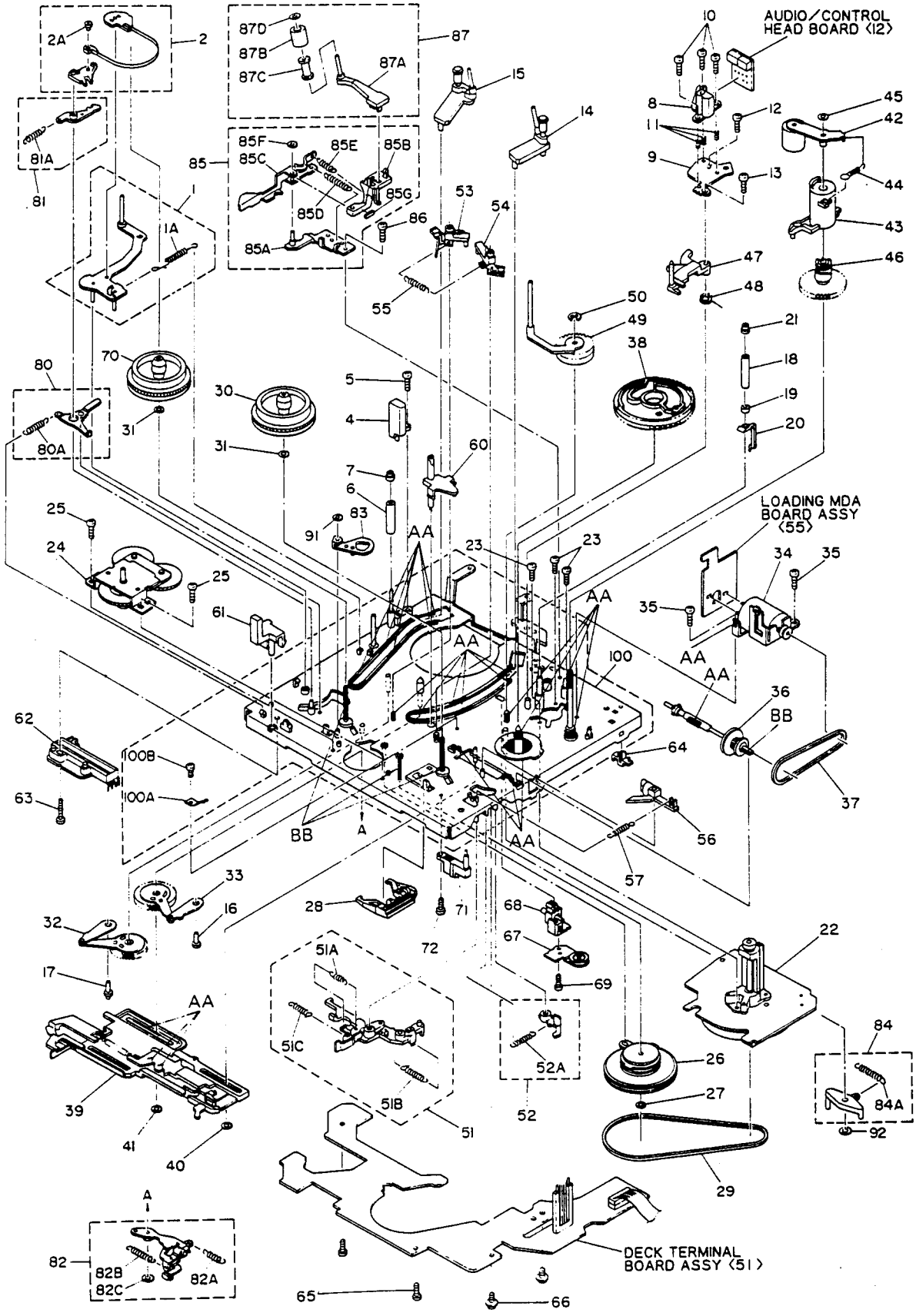
Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.


CASSETTE HOUSING BOARD (56)
VIDEO INTERFACE BOARD ASSY (10)
WIDE ASPECT SUB BOARD ASSY (33)
VIDEO UNIT BOARD ASSY (05)
PRIMARY BOARD ASSY (60)
AUDIO UNIT BOARD ASSY (09)
UPPER DRUM BOARD (62)
REGULATOR (2) BOARD ASSY (18)
PRE AMP BOARD ASSY (42)
SWITCH REGULATOR BOARD ASSY (01)
REGULATOR (1) BOARD ASSY (02)
TERMINAL BOARD ASSY (06)
A/S/M BOARD ASSY (04)
IF BOARD ASSY (07)
TUNER CTL BOARD ASSY (08)
REC AMP BOARD ASSY (43)
DEMODULATOR BOARD ASSY (14)
RF CONVERTER (INCL. (08))
MECHANISM ASSY (M4)
TIMER BOARD ASSY (20)
JACK BOARD ASSY (24)
SWITCH/DISPLAY BOARD ASSY (28)

CHASSIS ASSEMBLY <M3>

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
⚠	1	PQ10995-1-9	BOTTOM CHASSIS
	2	PDV2259A	DRUM ASSEMBLY
	2A	PDM2070B	UPPER DRUM ASSY
	2B	PDM4165A	DRUM SCREW ASSY,X2
	2C	PDM2138AD	LOWER DRUM MOTOR ASSY
	2D	PDM4229A-1	BRUSH ASSY
	2E	SPSG2606Z	SCREW
	2F	PDM4226A	ROLLER ASSY
	3	SDST2610Z	SCREW, X3, FOR DRUM ASSEMBLY
	4	PQ43831	SPECIAL SCREW, X3, MECH ASSY
	5	PUS29499D	CASSETTE HOUSING ASSY
		SDST2608Z	SCREW, X4, FOR CASS.HOUSING
	6	SDST2608Z	SCREW, X4, FOR CASS.HOUSING
	7	SDST2606Z	SCREW, X2, FOR REC BOARD
	8	SDSF3010Z	SCREW, X2, FOR SW.REG BOARD
	9	PQ44940-1-1	PLATE(EARTH)
⚠	10	PQ21038-5-3	TERMINAL BOARD
	11	PQ33380	BRACKET, FOR RF CONV.
	12	SDST2606Z	SCREW, FOR RF CONV.
	13	SDSF2608Z	SCREW, X2, FOR RF CONV.
	14	PQ45160	INERTIA PLATE
	15	PQM30029-153	SPACER
	16	PQM30029-161	SPACER
	17	SDSF3010Z	SCREW, X2, FOR TUNER UNIT
	18	SDSF3010Z	SCREW, X7, FOR VIDEO BOARD
	19	SDSF3010M	SCREW, X5, FOR REAR
	22	SDSF3010Z	SCREW, FOR TERMINAL

4.4 MECHANISM ASSEMBLY <M4>



Category	Part number	MARK
Grease	KANTO-G-31KAV	AA
Oil	COSMO-HV56	BB

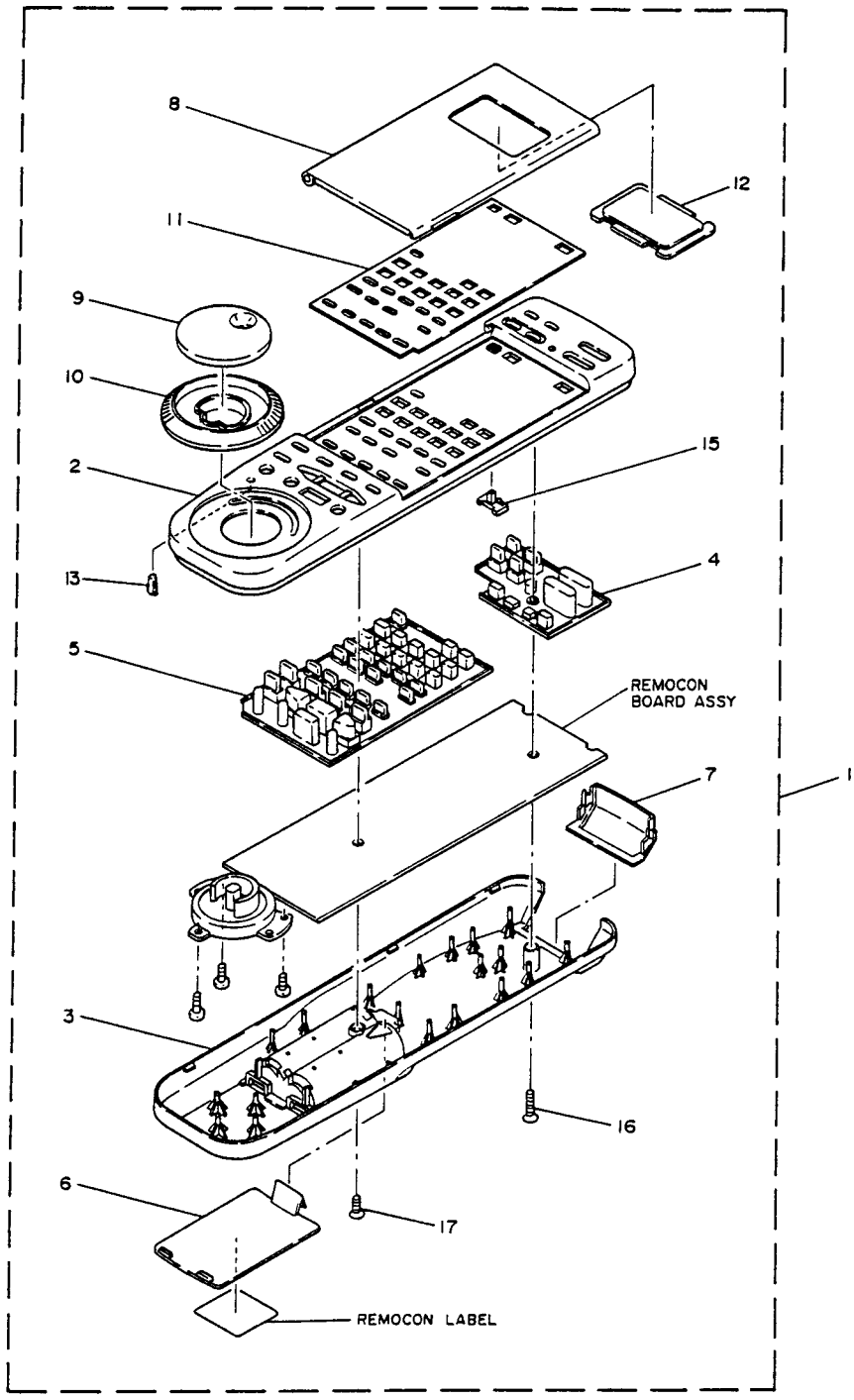
NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

MECHANISM ASSEMBLY <M4>

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	1	PQ43497E-11	TENSION ARM ASSY
	1A	PQ43500	TENSION SPRING
	2	PQ44734A-7	TENSION BAND ASSY
	2A	PQ45456	ADJUST PIN
	4	PU60616	FULL ERASE HEAD
	5	SDSF2614Z	SCREW
	6	PQ43505-1-1	ROLLER
	7	PQ43506	GUIDE POLE CAP
	8	PU61002	AUDIO/CONTROL HEAD
	9	PQ43509	HEAD BASE
	10	PQ43687A	SPECIAL SCREW,X3
	11	PQM30002-192	COMPRESSION SP,X3
	12	SPSF2608M	SCREW
	13	SPSP2606Z	SCREW
	14	PU61103-2	POLE BASE ASSY (TAKE-UP)
	15	PU61151-2-3	POLE BASE ASSY (SUPPLY)
	16	PQ43524	STOPPER
	17	PQ43525	STOPPER 2
	18	PQ43526-1-3	TAPE GUIDE
	19	PQ43670-1-1	GUIDE FLANGE
	20	PQ43675	TAPE GUARD
	21	PQ43506	GUIDE POLE CAP
⚠	22	PU61003-1-2	CAPSTAN MOTOR
	23	SPSG2608Z	SCREW,X3
	24	PU61246	IDLER GEAR UNIT
	25	SPST2606Z	SCREW,X2
	26	PU61245-1-1	CLUTCH UNIT
	27	PQM30017-8	SLIT WASHER
	28	PQ43532B	CHANGE LEVER ASSY
	29	PU61006	TIMING BELT
	30	PU60858-1-4	REEL DISK (TAKE-UP)
	31	PQM30018-54	SPACER,X2
	32	PQ43537A	LOADING ARM ASSY (SUPPLY)
	33	PQ43542B	LOADING ARM ASSY (TAKE-UP)
	34	PQ43676B-5	MODE MOTOR ASSY
	or	PQ43676C-7	MODE MOTOR ASSY
	35	SPST2606Z	SCREW,X2
	36	PQ43548A-3	WORM CLUTCH ASSY
	37	PQM30003-23	LOADING BELT
	38	PQ20822-2-7	CONTROL CAM
	39	PQ44581A-6	PLATE ASSY
	40	PQM30017-12	SLIT WASHER
	41	PQM30017-8	SLIT WASHER
	42	PQ43558A	PINCH ROLLER ARM ASSY
	or	PQ43558B	PINCH ROLLER ARM ASSY
	43	PQ32415	PINCH ROLLER PRESS LEVER
	44	PQM30001-233	TENSION SPRING
	45	PQM30017-12	SLIT WASHER
	46	PQ32416-2	PINCH ROLLER CAM
	47	PQ43567A-13	GUIDE ARM ASSY
	48	PQ43569-1-3	TORSION SPRING
	49	PQ43570A-2	HALF LOADING GEAR ASSY
	50	PQM30017-12	SLIT WASHER

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	51	PQ43575A-5	CANCEL LEVER ASSY
	51A	PQM30001-273	TENSION SPRING
	51B	PQM30001-237	TENSION SPRING
	51C	PQM30001-274	TENSION SPRING
	52	PQ43578A-2	HOOK ASSY
	52A	PQM30001-238	TENSION SPRING
	53	PQ43581C	MAIN BRAKE ASSY (SUPPLY)
	54	PQ43582B	MAIN BRAKE ASSY (TAKE-UP)
	55	PQM30001-251	TENSION SPRING
	56	PQ43583A	SUB BRAKE ASSY (TAKE-UP)
	57	PQM30001-346	TENSION SPRING
	60	PU60621-1-2	LED HOLDER, (INCL. LED:D1)
	61	PU60624-1-4	REC SAFETY SWITCH,(S2)
	62	PU61247	SLIDE ENCORDER,(S3)
	63	SDSF2614Z	SCREW
	64	PQ32516	PWB HOLDER
	65	SDST2616Z	SCREW,X2
	66	GPSF2608Z	SCREW,X2
	67	PQ43912A-7	PULLEY ARM ASSY
	68	PQ33249	PULLEY BASE
	69	PQ45121A	SCREW
	70	PU60859-1-4	REEL DISK (SUPPLY)
	71	PU61008	CASSETTE SW,(S1)
	72	SDST2608Z	SCREW
	80	PQ44739A-1	LOCK LEVER 1 ASSY
	80A	PQM30001-278-46	TENSION SPRING
	81	PQ44741A-3	LOCK LEVER 2 ASSY
	81A	PQM30001-279-52	TENSION SPRING
	82	PQ44743A-7	IDLER LEVER ASSEMBLY
	82A	PQM30001-344	TENSION SPRING
	82B	PQM30001-301	TENSION SPRING
	82C	PQM30017-5	SLIT WASHER
	83	PQ44746A-2	OFF LEVER ASSY
	84	PQ44585A-6	CAPSTAN BRAKE ASSEMBLY
	84A	PQM30001-282-52	SPRING
	85	PQ44843B	A.BASE ASSY
	85A	PQ44845A-2	A.BASE SUB ASSY
	85B	PQ33511-1-2	CLEANER ARM
	85C	PQ44841-1-3	CANCEL LEVER
	85D	PQM30001-299	TENSION SPRING
	85E	PQM30001-300	TENSION SPRING
	85F	PQM30017-5	SLIT WASHER
	85G	PQM30029-169	SPACER
	86	SPST2606Z	SCREW
	87	PQ44840A-3	CLEANER BASE ASSY
	87A	PQ44844A	CLEANER BASE SUB ASSY
	87B	PQ44837	CLEANER
	87C	PQ44838	CLEANER HOLDER
	87D	PQM30017-38	SLIT WASHER
	91	PQM30017-5	SLIT WASHER
	92	PQM30017-8	SLIT WASHER
	100	PQ20994A-5	MAIN DECK ASSEMBLY
	or	PQ21232A-1	MAIN DECK ASSEMBLY
	100A	PQ43849	EARTH PLATE
	100B	SPST2604Z	SCREW

4.5 REMOTE CONTROL UNIT <M5>



REMOTE CONTROLLER <M5>

△	REF.No	PART No.	PART NAME,DESCRIPTION
△	1	PQ11237J	REMOTE CONTROLLER, E/EG
△		PQ11237L	REMOTE CONTROLLER, EK
	2	PQ11221-4	COVER(FRONT), E/EG
		PQ11221-5	COVER(FRONT), EK
	3	PQ11093	COVER(REAR)
	4	PQ33870-2	BUTTON(1)
	5	PQ21276-5	BUTTON(3)
	6	PQ33609	CAP(BATTERY)
	7	PQ33610	WINDOW(IR)
	8	PQ33915-5	DOOR
	9	PQ33612-1-1	KNOB(JOG)
	10	PQ33613-1-2	KNOB(SHUTTLE)
	11	PQ33914-5	PLATE, E/EG
		PQ33914-6	PLATE, EK
	12	PQ45167	WINDOW(DOOR)
	13	PQ45206	INDICATOR(A)
	15	PQ45219	KNOB(SLIDE)
	16	SSSF2008M	SCREW

SECTION 5
ELECTRICAL PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety.Replace only with specified part numbers.

⚠	REF.No	PART No.	PART NAME,DESCRIPTION

SWITCHING REGULATOR BOARD ASSEMBLY 〈01〉〈02〉〈60〉

	PWBA	PB10565F	SW.REG BOARD ASSEMBLY,E
		PB10565B	SW.REG BOARD ASSEMBLY,EG
		PB10565C	SW.REG BOARD ASSEMBLY,EK
⚠	COV1	PQ33981	COVER(AC)
⚠	COV2	PQ33644-1-2	COVER(AC) (2)
	ERT1	PQ44695	EARTH PLATE
	BKT1	PQ21026-2-3	BRACKET (1)
	BKT2	PQ21027-4-3	BRACKET (2)
⚠	BKT3	PQ33381-2	BRACKET(POWER),E/EG
⚠		PQ33381-3	BRACKET(POWER),EK
	BKT4	PQ33965	BRACKET(SW.REG)
⚠	HD1	QHS3771-108	STRAIN RELIEF
	SCW1	SDST3006Z	SCREW,X8
	SCW2	SDSP3008Z	SCREW
⚠	POC1	QMP4019-200	POWER CORD,EG
⚠		QMP51D0-200	POWER CORD,EK
⚠		QMP39H0-200	POWER CORD,E
⚠	SKT1	QMC9021-001	AC OUTLET,E/EG
	SLD1	PQ33382	SHIELD COVER(1)
	SLD2	PQ33383	SHIELD COVER(2)

-SWITCHING REGULATOR BOARD ASSEMBLY<01>-

	PWBA1	PB10565B1	SW.REG BOARD ASSEMBLY,EG
		PB10565C1	SW.REG BOARD ASSEMBLY,EK
		PB10565F1	SW.REG BOARD ASSEMBLY,E
	IC1	LM358P	IC
	or	XRA10358	IC
	or	BA10358	IC
	or	LM358N	IC
	Q1	2SC4304-LF619	TRANSISTOR
	or	2SC3752(LM)-CB7	TRANSISTOR
	Q2	2SC3616(MLK)	TRANSISTOR
	Q4	2SB941P	TRANSISTOR
	Q5	2SA1515(QR)	TRANSISTOR
	D1	RB-156LFB	DIODE
	D2	AU01	FR DIODE
	or	1SR153-400-T2	FR DIODE
	D3	AU01	FR DIODE
	or	1SR153-400-T2	FR DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D4	AU01Z	FR DIODE	
	or	1SR153-200-T2	FR DIODE	
	or	ERA18-02-T2	FR DIODE	
	D5	MTZ27BT-77	ZENER DIODE	
	D7	AK04	DIODE	
	or	11EQS04	SB DIODE	
	D8	AK04	DIODE	
	or	11EQS04	SB DIODE	
	D10	MTZ33AT-77	ZENER DIODE	
	D11	AU01Z	FR DIODE	
	or	1SR153-200-T2	FR DIODE	
	or	ERA18-02-T2	FR DIODE	
	D12	11EFS2	FR DIODE	
	D14	FML-12S	FR DIODE	
	or	5DL2CZ41A	FR DIODE	
	or	FCF06A20	FR DIODE	
	D15	AU01Z	FR DIODE	
	or	1SR153-200-T2	FR DIODE	
	or	ERA18-02-T2	FR DIODE	
	D16	FMB-24	BARRIER DIODE	
	or	F5KQ40B	BARRIER DIODE	
	or	5GWJ2CZ42	BARRIER DIODE	
	D18	MTZV6.2A	ZENER DIODE	
	D19	RD33ES-T1B4	ZENER DIODE	
	R2	QRZ0078-2R2	W.W.RESISTOR	2.2Ω,2W
	R3	QRD161J-184	RESISTOR	180KΩ,1/6W
	R4	QRD161J-184	RESISTOR	180KΩ,1/6W
	R5	QRD161J-563	RESISTOR	56KΩ,1/6W
	R6	QRG029J-683G	OMF RESISTOR	68KΩ,2W
	R7	QRG029J-561A	OMF RESISTOR	560Ω,2W
	R8	QRG029J-331G	RESISTOR	330Ω,2W
	R9	QRX014J-R33Z	MF RESISTOR	0.33Ω,1W
	R10	QRD161J-122	RESISTOR	1.2KΩ,1/6W
	R11	QRD161J-471	RESISTOR	470Ω,1/6W
⚠	R12	QRZ0077-470X	FUSIBLE RESISTOR	47Ω,1/4W
	R14	QRD161J-103	RESISTOR	10KΩ,1/6W
⚠	R15	QRZ0077-470X	FUSIBLE RESISTOR	47Ω,1/4W
	R16	QRV144F-1072AY	CMF RESISTOR	10.7Ω,1/4W
	R17	QRV144F-1002A	CMF RESISTOR	10KΩ,1/4W
	R18	QRD161J-331	RESISTOR	330Ω,1/6W
	R19	QRD161J-222	RESISTOR	2.2KΩ,1/6W
	R21	QRV144F-1182A	CMF RESISTOR	11.8KΩ,1/4W
	R22	QRV144F-1002A	CMF RESISTOR	10.0KΩ,1/4W
	R23	QRV144F-4023A	RESISTOR	4KΩ,1/4W
	R24	QRD161J-471	RESISTOR	470Ω,1/6W
	R26	QRG029J-303A	OMF RESISTOR	30KΩ,2W
⚠	R27	QRZ0077-220X	FUSIBLE RESISTOR	22Ω,1/4W
	R29	QRD161J-102	RESISTOR	1KΩ,1/6W
⚠	C1	QFZ9022-333	MM CAPACITOR	0.033μF,250V
⚠		or QFZ9037-333	M CAPACITOR	0.033μF,250V
⚠	C2	QFZ9022-333	MM CAPACITOR	0.033μF,250V
⚠		or QFZ9037-333	M CAPACITOR	0.033μF,250V

⚠	REF.No		PART No.	PART NAME,DESCRIPTION	
⚠	C3		QFZ9022-333	MM CAPACITOR	0.033μF, 250V
⚠		or	QFZ9037-333	M CAPACITOR	0.033μF, 250V
⚠	C4		QCZ9016-222M	CAPACITOR	0.022μF, 250V
⚠	C5		QCZ9016-222M	CAPACITOR	0.022μF, 250V
⚠	C6		QCZ9016-222M	CAPACITOR	0.022μF, 250V
⚠	C7		QCZ9016-222M	CAPACITOR	0.022μF, 250V
	C8		PECA0738-107	E CAPACITOR	100μF, 400V
		or	PECA0793-107	E CAPACITOR	100μF, 400V
	C9		QCZ0212-472	CAPACITOR	0.0047μF, 1KV
		or	QCY53AK-472	CAPACITOR	0.0047μF, 1KV
	C10		QCZ0213-101Z	CAPACITOR	100PF, 1KV
	C11		PECA0780-224Z	M CAPACITOR	0.22μF, 50V
		or	QFV11HJ-224	TF CAPACITOR	0.22μF, 50V
	C12		QFLA1HJ-682Z	M CAPACITOR	0.068μF, 50V
	C13		QETC1HM-105	E CAPACITOR	1μF, 50V
	C14		QEZ0156-127Z	E CAPACITOR	120μF, 25V
		or	QEZ0135-127Z	E CAPACITOR	120μF, 10V
	C15		QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C16		QEZ0104-396Z	E CAPACITOR	39μF, 25V
		or	QEZ0141-396Z	E CAPACITOR	39μF, 10V
	C17		QETC1VM-336	E CAPACITOR	33μF, 35V
	C18		QCBB1HJ-271	CAPACITOR	270PF 50V
	C19		QEZ0125-277	E CAPACITOR	270μF, 25V
		or	QEZ0138-277	E CAPACITOR	270μF, 10V
	C20		QETC1EM-227	E CAPACITOR	220μF, 25V
	C21		QFN31HJ-103	M CAPACITOR	0.01μF, 25V
	C22		QEZ0105-228	E CAPACITOR	2200μF, 25V
		or	QEZ0137-228	E CAPACITOR	2200μF, 10V
	C23		QETB1CM-228	E CAPACITOR	2200 μF, 16V
	C24		QETC1JM-336	E CAPACITOR	33μF, 63V
	C25		QEZ0106-228	E CAPACITOR	2200μF, 25V
		or	QEZ0136-228	E CAPACITOR	2200μF, 10V
	C26		QETB1AM-228	E CAPACITOR	2200μF, 10V
	C27		QFN31HJ-102	M CAPACITOR	0.001μF, 50V
	C28		QFLA1HJ-223Z	M CAPACITOR	0.001μF, 50V
	C29		QFV11HJ-104	MM CAPACITOR	0.022μF, 50V
		or	QFV41HJ-104	TF CAPACITOR	0.1μF, 50V
⚠	C32		QCZ9016-101K	CAPACITOR	100PF, 250V
⚠	C33		QCZ9016-101K	CAPACITOR	100PF, 250V
⚠	C34		QCZ9016-222M	CAPACITOR	0.0022μF, 250V
⚠	C35		QCZ9016-222M	CAPACITOR	0.0022μF, 250V
	L1		PU48530-100K	COIL	10μH
	L2		PELN0270-330KZ	COIL	33μH
	L3		PELN0270-330KZ	COIL	33μH
	L4		PELN0270-330KZ	COIL	33μH
⚠	PC1		PC111S	PHOTO COUPLER	
⚠	T1		PELN0542	SW TRANS	
⚠	HS1		PEME0843	HEAT SINK, FOR Q1	
⚠	HS2		PU61191	HEAT SINK(1), FOR D14,D16	
⚠	HS3		PQ44774	HEAT SINK, FOR Q4	
⚠	LF1		PU60347	LINE FILTER	
⚠		or	PU61108	LINE FILTER	
⚠	LF2		PELN0255	LINE FILTER	
⚠			PU60020	LINE FILTER	
⚠		or	PU59707	LINE FILTER	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	SCW1	SDSG3008Z	SCREW, FOR Q1
	SCW2	DPSP3008Z	SCREW, X2, FOR D14,D16
	SCW3	SDSG3008Z	SCREW, FOR Q4
	CN1	PU60417-105	CONNECTOR
⚠	CP1	ICP-N10	CIRCUIT PROTECTOR
⚠	CP3	ICP-N25	CIRCUIT PROTECTOR

-REGULATOR BOARD ASSEMBLY<02>-

	PWBA2	PB10565C2	REG(1) BOARD ASSEMBLY,EK
		PB10565F2	REG(1) BOARD ASSEMBLY,E
		PB10565B2	REG(1) BOARD ASSEMBLY,EG
	IC2	LM358P	IC
	or	XRA10358	IC
	or	BA10358	IC
	or	LM358N	IC
	Q31	2SD2159(UV)	TRANSISTOR
	Q32	2SB1068(KU)	TRANSISTOR
	Q34	2SD1855(EF)	TRANSISTOR
	Q36	2SD1796	TRANSISTOR
	or	2SD1856	TRANSISTOR
	D35	UZ5.1BSC	ZENER DIODE
	or	RD5.1ES-T1B3	ZENER DIODE
	R31	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R32	QRD161J-471	RESISTOR 470Ω, 1/6W
	R33	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R34	QRD161J-331	RESISTOR 330Ω, 1/6W
	R35	QRD161J-222	RESISTOR 2.2KΩ, 1/6W
	R36	QVZ3521-222Z	V RESISTOR, SWD 5V
	or	QVZ3521-222	V RESISTOR, SWD 5V
	R37	QRD161J-123	RESISTOR 12KΩ, 1/6W
	R38	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R39	QRD161J-112	RESISTOR 1.1KΩ, 1/6W
	R40	QRD161J-103	RESISTOR 10KΩ, 1/6W
	R41	QRD161J-222	RESISTOR 2.2KΩ, 1/6W
	R45	QRD161J-752	RESISTOR 7.5KΩ, 1/6W
	R46	QRD161J-103	RESISTOR 10KΩ, 1/6W
	R47	QRD161J-682	RESISTOR 6.8KΩ, 1/6W
	C41	QETC0JM-107	E CAPACITOR 100μF, 6.3V
	C42	QEK60JM-107	E CAPACITOR 100μF, 6.3V
	C43	QEK61CM-107	E CAPACITOR 100μF, 16V
	C44	QEK61CM-107	E CAPACITOR 100μF, 16V
	C45	QFN31HJ-103	M CAPACITOR
	C46	QFN31HJ-103	M CAPACITOR 0.01μF, 50V
	C47	QEK61CM-107	E CAPACITOR 100μF, 16V
⚠	HS1	PQ44774-2	HEAT SINK
	SCW1	SDSG3008Z	SCREW
	TP	PU54983	TEST PIN, GND
	CN2	PU58844-105	CONNECTOR
	CN3	PU60417-109	CONNECTOR
	CN5	PU60417-105	CONNECTOR

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
⚠	CP4	ICP-N10	CIRCUIT PROTECTOR
⚠	CP5	ICP-N25	CIRCUIT PROTECTOR

-REGULATOR(2) BOARD ASSEMBLY<18>-

	PWBA3	PB10565C3	REG(2) BOARD ASSEMBLY,EK
		PB10565B3	REG(2) BOARD ASSEMBLY,EG
		PB10565F3	REG(2) BOARD ASSEMBLY,E
⚠	Q33	DTB114ES	TRANSISTOR,E EG
	Q35	2SB1068(KU)	TRANSISTOR
	D30	1SS133	DIODE,E EG
	or	MA165	DIODE,E EG
	R42	QRD161J-102	RESISTOR,E EG
	R43	QRD161J-272	RESISTOR 2.7KΩ,1/6W
	R44	QRD161J-103	RESISTOR 10KΩ,1/6W
	C48	QETC1CM-107	E CAPACITOR 100μF,16V
	C49	QETC1AM-107	E CAPACITOR 100μF,10V
	C50	QETC1JM-106	E CAPACITOR 10μF,63V
	CN4	PU58844-104	CONNECTOR
	CN6	PU60417-103	CONNECTOR
	CN7	PU58844-102	CONNECTOR,E EG
	CN10	PU58844-102	CONNECTOR,E EG

-PRIMARY BOARD ASSEMBLY<60>-

	PWBA4	PB20555B	PRIMARYBOARD ASSEMBLY,EK
		PB20555C	PRIMARY BOARD ASSMBLY,E
		PB20555D	PRIMARY BOARD ASSEMBLY,EG
	D6	1SS133	DIODE,E EG
⚠	RY1	PESW0555	RELAY,E EG
⚠	CL1	PU57505	FUSE CLIP,X4
	J4	PU60894-102	TERMINAL
	J5	PU60894-102	TERMINAL
	J6	PU60894-102	TERMINAL
	CN8	PU58844-2	CONNECTOR,E EG
⚠	CN12	PU60250-2K	CONNECTOR,E EG
⚠	CN13	PU60250-2	CONNECTOR,E EG
⚠	F1	QMF51E2-1R25	FUSE
⚠	or	QMF51E2-1R25J1	FUSE
⚠	F2	QMF51E2-2R0	FUSE,E EG
⚠	or	QMF51E2-2R0J1	FUSE,E EG

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A/M/S BOARD ASSEMBLY <04>

	PWBA	PB10614A-02	A/S/M BOARD ASSEMBLY,EG
		PB10614B-01	A/S/M BOARD ASSEMBLY,EK
		PB10614C-01	A/S/M BOARD ASSEMBLY,E

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
⚠	TB1	PQ21025-2	TERM. BOARD (2)
	BKT1	PQ44693-1-1	BRACKET(1), X2,
	BKT2	PQ44694-1-2	BRACKET (2)
	CL1	PU59311-4	WIRE CLAMP
	CL2	PEME0802	CLAMP, X3
	JA1	PEMC0760	PIN JACK
	JA2	PEMC0761	PIN JACK(SW)
	JP1	PU61012	MINI JACK
	SCW1	SDSF2608Z	SCREW, X2, FOR TERMIN AL BOARD
	SCW2	SDSG2606Z	SCREW, X3, FOR BKT(1)/(2)
	TP	PU55774	TEST PIN

-AUDIO SECTION-

	IC1	XRA15218	IC
	or	BA15218	IC
	IC2	XRA15218	IC
	or	BA15218	IC
	IC3	LA7222	IC
	IC4	LA7222	IC
	IC5	XRA15218	IC
	or	BA15218	IC
	IC7	LA7222	IC
	Q1	2SC3311A(RS)	TRANSISTOR
	Q2	DTA144ES	TRANSISTOR
	Q3	2SC1740S(RS)	TRANSISTOR
	or	2SC3199(G)	TRANSISTOR
	D1	1SS133	DIODE
	or	MA165	DIODE
	D2	1SS133	DIODE
	or	MA165	DIODE
	D3	1SS133	DIODE
	or	MA165	DIODE
	D4	1SS133	DIODE
	or	MA165	DIODE
	D8	1SS133	DIODE
	or	MA165	DIODE
	D9	1SS133	DIODE
	or	MA165	DIODE
	D10	1SS133	DIODE
	or	MA165	DIODE
	R1	QRD161J-102	RESISTOR 1KΩ,1/6W
	R2	QRD161J-102	RESISTOR 1KΩ,1/6W
	R3	QRD161J-223	RESISTOR 22KΩ,1/6W
	R4	QRD161J-273	RESISTOR 27KΩ,1/6W
	R5	QRD161J-823	RESISTOR 82KΩ,1/6W
	R6	QRD161J-221	RESISTOR 220Ω,1/6W
	R7	QRD162J-512	RESISTOR 5.1KΩ,1/6W
	R8	QRD161J-473	RESISTOR 47KΩ,1/6W
	R9	QRD161J-683	RESISTOR 68KΩ,1/6W
	R10	QRD161J-154	RESISTOR 150KΩ,1/6W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R11	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R12	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R13	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R14	QRD161J-124	RESISTOR	120KΩ, 1/6W
	R15	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R16	QRD161J-124	RESISTOR	120KΩ, 1/6W
	R17	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R18	QRD161J-184	RESISTOR	180KΩ, 1/6W
	R19	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R20	QRD161J-184	RESISTOR	180KΩ, 1/6W
	R21	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R22	QRD161J-271	RESISTOR	270Ω, 1/6W
	R23	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R24	QRD161J-271	RESISTOR	270Ω, 1/6W
	R25	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R26	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R27	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R28	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R29	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R30	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R31	QRD161J-151	RESISTOR	150Ω, 1/6W
	R32	QRD161J-151	RESISTOR	150Ω, 1/6W
	R33	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R34	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R35	QRD161J-221	RESISTOR	220Ω, 1/6W
	R36	QRD161J-221	RESISTOR	220Ω, 1/6W
	R45	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R46	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R47	QRD161J-271	RESISTOR	270Ω, 1/6W
	R48	QRD161J-223	RESISTOR	22KΩ, 1/6W
	C1	QETC1CM-476	E CAPACITOR	47μF, 16V
	C2	QETC1CM-476	E CAPACITOR	47μF, 16V
	C5	QETC1CM-106	E CAPACITOR	10μF, 16V
	C6	QETC1CM-106	E CAPACITOR	10μF, 16V
	C7	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C8	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C9	QETC1CM-106	E CAPACITOR	10μF, 16V
	C10	QETC1CM-106	E CAPACITOR	10μF, 16V
	C11	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C12	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C13	QETC1CM-107	E CAPACITOR	100μF, 16V
	C14	QETC1CM-107	E CAPACITOR	100μF, 16V
	C15	QETC1CM-226	E CAPACITOR	22μF, 16V
	C16	QETC1CM-226	E CAPACITOR	22μF, 16V
	C17	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C18	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C19	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C20	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C21	QEPC1CM-106	NP E CAPACITOR	10μF, 16V
	C22	QEPC1CM-106	NP E CAPACITOR	10μF, 16V
	C23	QETC1AM-476	E CAPACITOR	47μF, 10V
	C24	QETC1AM-476	E CAPACITOR	47μF, 10V
	C25	QCXB1CM-222	CAPACITOR	0.0022μF, 16V
	C26	QCXB1CM-222	CAPACITOR	0.0022μF, 16V
	C27	QETC1HM-105	E CAPACITOR	1μF, 50V
	C28	QCBB1HJ-151	CAPACITOR	150PF 50V
	C29	QETC1EM-475	E CAPACITOR	4.7μF, 25V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C30	QETC1HM-105	E CAPACITOR	1μF, 50V
	C31	QETC1HM-105	E CAPACITOR	1μF, 50V
	C32	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C33	QETC1CM-476	E CAPACITOR	47μF, 16V
	C36	QETC1CM-226	E CAPACITOR	22μF, 16V
	C37	QETC1CM-226	E CAPACITOR	22μF, 16V
	C38	QETC1CM-107	E CAPACITOR	100μF, 16V
	C39	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	C40	QENC1CM-226	NP E CAPACITOR	22μF, 16V
	L1	PU59152-R22J	COIL, E EG	0.22μH
	L2	PU59152-R22J	COIL, E EG	0.22μH
	LC1	PU59885-102	N FILTER, E EG	
	LC2	PU59885-102	N FILTER, E EG	
	K1	PU60281-5	FERRITE BEADS	
	CN1	PU58844-4	CONNECTOR	
	CN2	PU58844-6	CONNECTOR	
	CN3	PU58844-5	CONNECTOR	
	CN4	PEMC0714-015	CONNECTOR	
	CN5	PU58844-5	CONNECTOR	
	CN9	PU58844-2	CONNECTOR	
	CN10	PU58844-3	CONNECTOR	
	CN11	PU58844-2	CONNECTOR	

—SERVO SECTION—

IC401		HD49733NT	IC
	or	HD49733ANT	IC
IC441		LM358N	IC
	or	LM358P	IC
	or	UPC358C	IC
	or	XRA10358	IC
	or	BA10358	IC
IC442		MC14066BCP	IC
	or	BU4066B	IC
	or	CD4066BE	IC
IC451		BA7039	IC
	or	XRA7039	IC
Q401		2SA1267(YG)-TJK	TRANSISTOR
	or	2SA1309(QRS)	TRANSISTOR
	or	2SA933S(QRS)	TRANSISTOR
Q402		DTC144ES	TRANSISTOR
Q441		DTC124ES	TRANSISTOR
Q442		DTC124ES	TRANSISTOR
D402		1SS133	DIODE
	or	MA165	DIODE
D403		1SS133	DIODE
	or	MA165	DIODE
D404		1SS133	DIODE
	or	MA165	DIODE
D405		1SS133	DIODE
	or	MA165	DIODE
D406		1SS133	DIODE
	or	MA165	DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D407	1SS133	DIODE	
	or	MA165	DIODE	
	D408	1SS133	DIODE	
	or	MA165	DIODE	
	D411	1SS133	DIODE	
	or	MA165	DIODE	
	D412	1SS133	DIODE	
	or	MA165	DIODE	
	D451	1SS133	DIODE	
	R402	QRD161J-821	RESISTOR	820Ω, 1/6W
	R403	QRD161J-105	RESISTOR	1.0MΩ, 1/6W
	R404	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R405	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R406	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R407	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R408	QRD161J-225	RESISTOR	2.2MΩ, 1/6W
	R409	QRD161J-473	RESISTOR	47KΩ, 1/6W
	R410	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R411	QRD161J-123	RESISTOR	12KΩ, 1/6W
	R412	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R413	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R414	QRD161J-105	RESISTOR	1.0MΩ, 1/6W
	R415	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R417	QRD161J-224	RESISTOR	220KΩ, 1/6W
	R418	QRD161J-474	RESISTOR	470KΩ, 1/6W
	R419	QRD161J-823	RESISTOR	82KΩ, 1/6W
	R420	QRD161J-105	RESISTOR	1.0MΩ, 1/6W
	R421	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R422	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R423	QRD161J-335	RESISTOR	3.3MΩ, 1/6W
	R424	QRD161J-334	RESISTOR	330KΩ, 1/6W
	R425	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R426	QRD161J-822	RESISTOR	8.2KΩ, 1/6W
	R428	QRD161J-473	RESISTOR	47KΩ, 1/6W
	R429	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R431	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R434	QRD161J-274	RESISTOR	270KΩ, 1/6W
	R435	QRD161J-274	RESISTOR	270KΩ, 1/6W
	R441	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R442	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R443	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R444	QRD161J-393	RESISTOR	39KΩ, 1/6W
	R445	QRD161J-105	RESISTOR	1.0MΩ, 1/6W
	R446	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R447	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R448	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R449	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R451	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R452	QRD161J-182	RESISTOR	1.8KΩ, 1/6W
	R453	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R455	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R456	QRD161J-562	RESISTOR	5.6KΩ, 1/6W
	R458	QRD161J-184	RESISTOR	180KΩ, 1/6W
	R462	QRD161J-222	RESISTOR	2.2KΩ, 1/6W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C402	QEK61AM-226	E CAPACITOR	22μF, 10V
	C403	QEK61AM-226	E CAPACITOR	22μF, 10V
	C404	QCBB1HJ-271	CAPACITOR	270PF 50V
	C405	QCBB1HJ-561	CAPACITOR	560PF 50V
	C406	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
	C407	QEK61HM-105	E CAPACITOR	1μF, 50V
	C408	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
	C409	QFV71HJ-563	TF CAPACITOR	0.056μF, 50V
	or	QFN31HJ-563	M CAPACITOR	0.056μF, 50V
	C410	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
	C412	QCFB1EZ-223	CAPACITOR0	.022μF, 25V
	C413	QEK61AM-226	E CAPACITOR	22μF, 10V
	C414	QFV71HJ-224	TF CAPACITOR	0.022μF, 50V
	or	QFN31HJ-224	M CAPACITOR	0.022μF, 50V
	C415	QFV71HJ-223	TF CAPACITOR	0.022μF, 50V
	or	QFN31HJ-223	M CAPACITOR	0.022μF, 50V
	C416	QEK61EM-475	E CAPACITOR	4.7μF, 25V
	C417	QEK61EM-475	E CAPACITOR	4.7μF, 25V
	C418	QEK61CM-106	E CAPACITOR	10μF, 16V
	C419	QEK61CM-106	E CAPACITOR	10μF, 16V
	C420	QFV71HJ-223	TF CAPACITOR	0.022μF, 50V
	or	QFN31HJ-223	M CAPACITOR	0.022μF, 50V
	C421	QFV71HJ-184	TF CAPACITOR	0.18μF, 50V
	C422	QCBB1HJ-471	CAPACITOR	470PF 50V
	C423	QFLC1HJ-682Z	M CAPACITOR	0.0068μF, 50V
	or	QFN31HJ-682	M CAPACITOR	0.0068μF, 50V
	C426	QCBB1HJ-181	CAPACITOR	180PF 50V
	C427	QFV71HJ-473	TF CAPACITOR	0.047μF, 50V
	or	QFN31HJ-473	M CAPACITOR	0.047μF, 50V
	C441	QEK61CM-106	E CAPACITOR	10μF, 16V
	C451	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C452	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C453	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C454	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C455	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C456	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C457	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C458	QEK61AM-226	E CAPACITOR	22μF, 10V
	C459	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	L451	PU59152-270J	COIL	27μH
	CN402	PU59555-4	CONNECTOR	
	CN403	PU58844-8	CONNECTOR	
	CN404	PEMC0714-015	CONNECTOR	
	CN406	PU58844-2	CONNECTOR	
⚠	CP401	ICP-N15	CIRCUIT PROTECTOR	

—MECHACON SECTION—

IC601	M37524M4-129SP	IC
or	M37524E4-229SP	IC
IC603	M50255P	IC
IC604	CAT35C104P-004	IC, EK
	S-6731A-021	IC, E EG
or	CAT35C104P-021	IC, E EG
or	CAT35C104P-007	IC, E EG
or	S-6731A-004	IC

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	Q601	2SB1256	TRANSISTOR	
	Q602	2SC3199(GB)	TRANSISTOR	
	Q604	DTC124ES	TRANSISTOR	
	D601	1SS133	DIODE	
	or	MA165	DIODE	
	D602	11ES2	DIODE	
	or	ERA15-02	DIODE	
	or	S5688G	DIODE	
	or	1SR139-200	DIODE	
	D603	1SS133	DIODE	
	or	MA165	DIODE	
	D604	MTZ7.5B	ZENER DIODE	
	or	UZ7.5BSB	ZENER DIODE	
	or	HZS7.5EB2	ZENER DIODE	
	D605	1SS133	DIODE	
	or	MA165	DIODE	
	D606	1SS133	DIODE	
	or	MA165	DIODE	
	D607	1SS133	DIODE	
	or	MA165	DIODE	
	D610	MTZ7.5B	ZENER DIODE	
	or	HZS7.5EB2	ZENER DIODE	
	R601	QRD161J-332	RESISTOR	3.3KΩ, 1/6W
	R602	QRD161J-332	RESISTOR	3.3KΩ, 1/6W
	R603	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R604	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R605	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R606	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R607	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R608	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R609	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R611	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R612	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R613	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R614	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R615	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R616	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R617	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R618	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R619	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R620	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R621	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R622	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R623	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R624	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R625	QRD161J-105	RESISTOR	1.0MΩ, 1/6W
	R626	QRD161J-681	RESISTOR	680Ω, 1/6W
	R627	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R628	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R629	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R630	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R631	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R632	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R633	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R634	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R635	QRD161J-563	RESISTOR	56KΩ, 1/6W
	R636	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R637	QRD161J-333	RESISTOR	33KΩ, 1/6W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R638	QRD161J-303	RESISTOR	30KΩ, 1/6W
	R639	QRD161J-224	RESISTOR	220KΩ, 1/6W
	R640	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R641	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R642	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R643	QRD161J-333	RESISTOR	33KΩ, 1/6W
	R644	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R645	QRD161J-471	RESISTOR	470Ω, 1/6W
	R646	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R648	QRD161J-222	RESISTOR, E EG	2.2KΩ, 1/6W
		QRD161J-821	RESISTOR, EK	820Ω, 1/6W
	R649	QRD161J-182	RESISTOR	1.8KΩ, 1/6W
	R650	QRD161J-821	RESISTOR	820Ω, 1/6W
	R651	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R653	QRD161J-102	RESISTOR	1KΩ, 1/6W
	RA601	QRB045J-103XM	RESISTOR ARRAY	10KΩ
	or	QRB045J-103XF	RESISTOR ARRAY	10KΩ
	C601	QCFB1EZ-223	CAPACITOR	0.022μF, 25V
	C602	QEK61EM-335	E CAPACITOR	3.3μF, 25V
	C604	QEK61HM-105	E CAPACITOR	1μF, 50V
	C605	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C606	QCBB1HJ-121	CAPACITOR	120PF 50V
	C607	QCC11EJ-104	CAPACITOR	0.1μF, 25V
	C608	QCC11EJ-104	CAPACITOR	0.1μF, 25V
	C609	QCBB1HJ-101	CAPACITOR	100PF, 50V
	C610	QCSB1HJ-220	CAPACITOR	22PF, 50V
	C611	QCBB1HJ-101	CAPACITOR	100PF, 50V
	L601	PU59152-2R2J	COIL	2.2μH
⚠	CF601	PEVB0340	RESONATOR	
	CN601	PEMC0722-018	WIRE TRAP	
	or	PEMC0753-018	WIRE TRAP	
	CN602	PU59555-4	CONNECTOR	
	CN603	PU58844-2	CONNECTOR	
	CN604	PU60417-7	CONNECTOR	
	CN605	PU60417-9	CONNECTOR	
	CN607	PU60417-4	CONNECTOR	
	CN609	PU60417-7	CONNECTOR	
	CN610	PEMC0714-011	CONNECTOR	
	CN611	PU60417-3	CONNECTOR	
	CN612	PU60417-4	CONNECTOR	
⚠	CP601	ICP-N25	CIRCUIT PROTECTOR	
⚠	CP602	ICP-N38	CIRCUIT PROTECTOR	

-ON SCREEN SUB SECTION-

	Q101	DTC124ES	TRANSISTOR
	Q102	DTC124ES	TRANSISTOR
	Q103	DTC144WS	TRANSISTOR
	Q104	DTC124ES	TRANSISTOR
	Q105	2SA933S(RS)	TRANSISTOR
	D101	1SS133	DIODE
	D102	1SS133	DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D103	1SS133	DIODE	
	R101	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R102	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R103	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R104	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R105	QRD161J-562	RESISTOR	5.6KΩ, 1/6W
	R106	QRD161J-103	RESISTOR	10KΩ, 1/6W
	C101	QCBB1HJ-101	CAPACITOR	100PF, 50V
	CN101	PU58844-2	CONNECTOR	

—WIDE ASPECT SECTION—

IC701	UPD75402ACT-248	IC	
or	UPD75P402CT-248	IC	
IC702	MC14066BCP	IC	
or	CD4066BE	IC	
IC703	IC-PST529D-2	IC	
D701	1SS133	DIODE	
or	MA165	DIODE	
D702	1SS133	DIODE	
or	MA165	DIODE	
D703	1SS133	DIODE	
or	MA165	DIODE	
D704	1SS133	DIODE	
or	MA165	DIODE	
D705	1SS133	DIODE	
or	MA165	DIODE	
D706	1SS133	DIODE	
or	MA165	DIODE	
D707	1SS133	DIODE	
or	MA165	DIODE	
D708	1SS133	DIODE	
or	MA165	DIODE	
R701	QRD161J-333	RESISTOR	33KΩ, 1/6W
R702	QRD161J-102	RESISTOR	1KΩ, 1/6W
R704	QRD161J-102	RESISTOR	1KΩ, 1/6W
R705	QRD161J-102	RESISTOR	1KΩ, 1/6W
R706	QRD161J-102	RESISTOR	1KΩ, 1/6W
R707	QRD161J-103	RESISTOR	10KΩ, 1/6W
R708	QRD161J-473	RESISTOR	47KΩ, 1/6W
R709	QRD161J-103	RESISTOR	10KΩ, 1/6W
R710	QRD161J-221	RESISTOR	220Ω, 1/6W
R712	QRD161J-221	RESISTOR	220Ω, 1/6W
R714	QRD161J-103	RESISTOR	10KΩ, 1/6W
R715	QRD161J-103	RESISTOR	10KΩ, 1/6W
R716	QRD161J-103	RESISTOR	10KΩ, 1/6W
C701	QETC1CM-106	E CAPACITOR	10μF, 16V
C702	QCVB1CM-103	CAPACITOR	0.01μF, 16V
C703	QCVB1CM-103	CAPACITOR	0.01μF, 16V
C705	QETC1CM-226	E CAPACITOR	22μF, 16V
C707	QETC1CM-226	E CAPACITOR	22μF, 16V
C709	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
C710	QCT30CH-120	CAPACITOR	12PF, 50V
C711	QCT30CH-120	CAPACITOR	12PF, 50V
⚠ X701	PU60226-4	CRYSTAL RESONATOR	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	CN701	PU60417-6	CONNECTOR
	CN702	PU58844-3	CONNECTOR

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WIDE ASPECT SUB BOARD ASSEMBLY〈33〉

PWBA	PB10614A2-02	WIDE ASPECT SUBBOARD ASSEMBLY

—VIDEO SUB SECTION—

IC201	LVA523SA	IC
IC202	LVA521S	IC
IC203	CD4066BE	IC
or	BU4066B	IC
Q201	DTC144WS	TRANSISTOR
Q202	DTC144WS	TRANSISTOR
Q203	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q204	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q205	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q206	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q207	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q208	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q209	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q210	DTC144ES	TRANSISTOR
Q211	2SC1740S(RS)	TRANSISTOR
or	2SC3199(GB)-TJK	TRANSISTOR
or	2SC3311A(RS)	TRANSISTOR
or	2SC536SPA(FG)	TRANSISTOR
Q212	DTC144WS	TRANSISTOR
D201	1SS133	DIODE
or	MA165	DIODE
D202	1SS133	DIODE
or	MA165	DIODE
D203	1SS133	DIODE
or	MA165	DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D204	1SS133	DIODE	
	or	MA165	DIODE	
	D205	1SS133	DIODE	
	or	MA165	DIODE	
	D206	1SS133	DIODE	
	or	MA165	DIODE	
	D207	1SS133	DIODE	
	or	MA165	DIODE	
	R201	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R202	QRD161J-562	RESISTOR	5.6KΩ, 1/6W
	R204	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R205	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R206	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R207	QRD161J-222	RESISTOR	2.2KΩ, 1/6W
	R208	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R209	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R210	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R211	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R212	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
	R213	QRD161J-331	RESISTOR	330Ω, 1/6W
	R214	QRD161J-221	RESISTOR	220Ω, 1/6W
	R215	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
	R216	QRD161J-182	RESISTOR	1.8KΩ, 1/6W
	R217	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R218	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
	R219	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R220	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R221	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R222	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R223	QRD161J-683	RESISTOR	68KΩ, 1/6W
	R224	QRD161J-393	RESISTOR	39KΩ, 1/6W
	R225	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R226	QRD161J-332	RESISTOR	3.3KΩ, 1/6W
	R227	QRD161J-473	RESISTOR	47KΩ, 1/6W
	R228	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R229	QRD161J-221	RESISTOR	220Ω, 1/6W
	C201	QETC1EM-106	E CAPACITOR	10μF, 25V
	C202	QETC1EM-106	E CAPACITOR	10μF, 25V
	C203	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C204	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C205	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C206	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C207	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C208	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C209	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C210	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C211	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C212	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C213	QCSB1HJ-560	CAPACITOR	56PF, 50V
	C214	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C215	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C216	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C217	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C218	QCBB1HJ-561	CAPACITOR	560PF, 50V
	C219	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C221	QETC1CM-106	E CAPACITOR	10μF, 16V
	C222	QETC1HM-105	E CAPACITOR	1μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C223	QETC1CM-106	E CAPACITOR	10μF, 16V
	C224	QCSB1HJ-470	CAPACITOR	47PF, 50V
	L201	PU48530-101K	COIL	100μH
	L202	PU48530-101K	COIL	100μH
	L203	PU48530-101K	COIL	100μH
	L204	PU48530-101K	COIL	100μH
	L205	PU59988-180J	COIL	18μH
	BPF201	PU57072	BAND PASS FILTER	
	or	PU57072-2	BAND PASS FILTER	
	CN201	PU58844-4	CONNECTOR	
	CN202	PU58844-4R	CONNECTOR	
	CN203	PU60417-4	CONNECTOR	
	CN204	PU58844-2	CONNECTOR	
	CN205	PU58844-5	CONNECTOR	

—WIDE ASPECT SECTION—

	IC301	BA15218	IC
	Q301	DTA144ES	TRANSISTOR
	Q302	DTA144ES	TRANSISTOR
	Q303	DTC144ES	TRANSISTOR
	Q304	DTC144ES	TRANSISTOR
	Q305	DTC144ES	TRANSISTOR
	Q306	DTC114WS	TRANSISTOR
	Q307	2SB810H, J	TRANSISTOR
	Q308	2SC1740S(RS)	TRANSISTOR
	or	2SC3199(G)	TRANSISTOR
	or	2SC3311A(RS)	TRANSISTOR
	or	2SC536SPA(FG)	TRANSISTOR
	Q309	2SB810H, J	TRANSISTOR
	Q310	DTC114ES	TRANSISTOR
	Q311	DTC114WS	TRANSISTOR
	Q312	DTC144ES	TRANSISTOR
	Q313	2SC1740S(RS)	TRANSISTOR
	or	2SC3199(G)	TRANSISTOR
	or	2SC3311A(RS)	TRANSISTOR
	or	2SC536SPA(FG)	TRANSISTOR
	D301	1SS133	DIODE
	or	MA165	DIODE
	D302	1SS133	DIODE
	or	MA165	DIODE
	D303	1SS133	DIODE
	or	MA165	DIODE
	D304	1SS133	DIODE
	or	MA165	DIODE
	D305	1SS133	DIODE
	or	MA165	DIODE
	D306	1SS133	DIODE
	or	MA165	DIODE
	D307	1SS133	DIODE
	or	MA165	DIODE
	D308	1SS133	DIODE
	or	MA165	DIODE
	D309	1SS133	DIODE
	or	MA165	DIODE
	D310	1SS133	DIODE
	or	MA165	DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D311	1SS133	DIODE	
	or	MA165	DIODE	
	D312	1SS133	DIODE	
	or	MA165	DIODE	
	D313	1SS133	DIODE	
	or	MA165	DIODE	
	D314	1SS133	DIODE	
	or	MA165	DIODE	
	D315	1SS133	DIODE	
	or	MA165	DIODE	
	R302	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R304	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R305	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R306	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R307	QRD161G-822	RESISTOR	8.2KΩ, 1/6W
	R308	QRD161G-332	RESISTOR	3.3KΩ, 1/6W
	R309	QRD161G-362	RESISTOR	3.6KΩ, 1/6W
	R310	QRD161G-472	RESISTOR	4.7KΩ, 1/6W
	R311	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R312	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R313	QRD161J-104	RESISTOR	100KΩ, 1/6W
	R314	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R315	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
	R316	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R318	QRD122J-331	RESISTOR	330Ω, 1/2W
	R319	QRD161J-393	RESISTOR	39KΩ, 1/6W
	R320	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R321	QRD161J-512	RESISTOR	5.1KΩ, 1/6W
	R322	QRD161J-752	RESISTOR	7.5KΩ, 1/6W
	R323	QRD161J-393	RESISTOR	39KΩ, 1/6W
	R324	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R325	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R326	QRD161J-102	RESISTOR	1KΩ, 1/6W
	C301	QETC1CM-336	E CAPACITOR	33μF, 16V
	C302	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C307	QETC1CM-226	E CAPACITOR	22μF, 16V
	CN301	PU60417-6	CONNECTOR	
	CN302	PU60417-3	CONNECTOR	
	CN303	PU58844-2	CONNECTOR	

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VIDEO UNIT BOARD ASSEMBLY 〈05〉

PWBA	PB10580B-01	VIDEO UNIT BOARD ASSEMBLY, E
	PB10580C	VIDEO UNIT BOARD ASSEMBLY, EK
	PB10580D	VIDEO UNIT BOARD ASSEMBLY, EG
SLD1	PU61177-1-2	SHIELD CASE
SLD2	PU61178	SHIELD PLATE
SLD3	PQ44640	SHEET(SHIELD)

—Y SECTION—

IC401	PB20432D	Y MODULE BOARD ASSEMBLY
IC402	CXL5003M	IC
IC404	MC74HC4538N	IC

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	IC405	CD40668E	IC	
	or	BU4066B	IC	
	IC406	TC4S81F	IC	
	IC407	TC4S01F	IC	
	IC408	TC4S30F	IC	
	IC409	TC4S71F	IC	
	Q401	2SC4081(QRS)	TRANSISTOR	
	Q402	2SC4081(QRS)	TRANSISTOR	
	Q403	2SC4081(QRS)	TRANSISTOR	
	Q404	2SC4081(QRS)	TRANSISTOR	
	Q407	2SA1576(QRS)	TRANSISTOR	
	Q408	DTC144WU	TRANSISTOR	
	Q409	2SA1576(QRS)	TRANSISTOR	
	Q411	DTA144EU	TRANSISTOR	
	Q412	DTC144WU	TRANSISTOR, E EG	
	Q413	DTC124EU	TRANSISTOR	
	Q414	DTC144WU	TRANSISTOR	
	Q415	DTC144WU	TRANSISTOR	
	D401	DAP202U	DIODE	
	D404	DAN202U	DIODE	
	D405	DAN202U	DIODE	
	D406	DAN202U	DIODE	
	D407	DAN202U	DIODE	
	D408	DAN202U	DIODE	
	D410	1SS133	DIODE	
	or	MA165	DIODE	
	R401	QRS188J-122YN	RESISTOR	1.2KΩ, 1/8W
	R402	QRS188J-272YN	RESISTOR	2.7KΩ, 1/8W
	R403	QRSA08J-392YN	RESISTOR	3.9KΩ, 1/10W
	R404	QRSA08J-821YN	RESISTOR	820Ω, 1/10W
	R405	QRS188J-182YN	RESISTOR	1.8KΩ, 1/8W
	R406	QRSA08J-271YN	RESISTOR	270Ω, 1/10W
	R407	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R408	QRSA08J-105YN	RESISTOR	1.0MΩ, 1/10W
	R409	QRSA08J-475YN	RESISTOR	4.7MΩ, 1/10W
	R410	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R412	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R413	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R415	QRSA08J-242YN	RESISTOR	2.4KΩ, 1/10W
	R416	QVZ3518-151	V RESISTOR, SUB EMPHA IN LEVEL	
	R417	QRSA08J-391YN	RESISTOR	390Ω, 1/10W
	R419	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R420	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R422	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R423	QRSA08J-223YN	RESISTOR, E EG	22KΩ, 1/10W
	R424	QRSA08J-223YN	RESISTOR, EK	22KΩ, 1/10W
	R425	QRSA08F-431YN	RESISTOR	430Ω, 1/10W
	R427	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R428	QRSA08J-392YN	RESISTOR	3.9KΩ, 1/10W
	R429	QRSA08J-274YN	RESISTOR	270KΩ, 1/10W
	R430	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R431	QRSA08J-475YN	RESISTOR	4.7MΩ, 1/10W
	R433	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R434	QRSA08J-393YN	RESISTOR	39KΩ, 1/10W
	R435	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R436	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R437	QRSA08J-183YN	RESISTOR	18KΩ, 1/10W
	R438	QRSA08J-562YN	RESISTOR	5.6KΩ, 1/10W
	R439	QRSA08J-562YN	RESISTOR	5.6KΩ, 1/10W
	R440	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R441	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R443	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R444	QVZ3518-102	V RESISTOR, Y NR BALANCE	
	R445	QRSA08J-242YN	RESISTOR	2.4KΩ, 1/10W
	R446	QRSA08J-242YN	RESISTOR	2.4KΩ, 1/10W
	R447	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R448	QRS188J-222YN	RESISTOR	2.2KΩ, 1/8W
	R449	QRSA08J-512YN	RESISTOR	5.1KΩ, 1/10W
	R450	QRS188J-101YN	RESISTOR	100Ω, 1/8W
	R451	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
	R453	QRSA08J-683YN	RESISTOR	68KΩ, 1/10W
	R454	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R455	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R456	QRSA08J-241YN	RESISTOR	240Ω, 1/10W
	C401	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C402	QCSA1HJ-7R0	CAPACITOR	7RPF 50V
	C403	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C404	QCYA1EK-104	CAPACITOR	0.1μF, 25V
	C405	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C406	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C407	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C408	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C409	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C410	QETC1CM-476	E CAPACITOR	47μF, 16V
	C411	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C412	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C413	QETC1CM-476	E CAPACITOR	47μF, 16V
	C414	QCYA1HK-223	CAPACITOR	0.022μF, 50V
	C415	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C416	QETC1CM-226	E CAPACITOR	22μF, 16V
	C417	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C418	QETC1HM-225	E CAPACITOR	2.2μF, 50V
	C419	QETC1HM-225	E CAPACITOR	2.2μF, 50V
	C420	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C421	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C422	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C423	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C424	QCSA1HJ-100	CAPACITOR	10PF, 50V
	C425	QCTA1CH-181	CAPACITOR	180PF, 16V
	C426	QCTA1CH-471	CAPACITOR	470PF, 16V
	C429	QCSA1HJ-300	CAPACITOR	30PF, 50V
	C430	QCSA1HJ-620	CAPACITOR	62PF, 50V
	C431	QCSA1HJ-151	CAPACITOR	150PF, 50V
	C433	QCYA1HK-473	CAPACITOR0	.047μF, 50V
	C435	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C436	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C437	QETC1CM-106	E CAPACITOR	10μF, 16V
	C438	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C439	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C440	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C441	QCSA1HJ-271	CAPACITOR	270PF, 50V
	C442	QCSA1HJ-102	CAPACITOR	0.001μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C443	QETC1CM-106	E CAPACITOR	10μF, 16
	C445	QCYA1HK-103	CAPACITOR	0.01μF, 50
	C450	QCSA1HJ-101	CAPACITOR	100PF, 50
	C451	QCSA1HJ-221	CAPACITOR	220PF 50V
	C452	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C453	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C454	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C456	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C457	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C458	QCYA1EK-104	CAPACITOR	0.1μF, 25
	C459	QETC0JM-227	E CAPACITOR	220μF, 6.3
	C460	QCTA1CH-680	CAPACITOR	68PF, 16
	C461	QCSA1HJ-221	CAPACITOR	220PF, 50
	L401	PU48530-101K	COIL	100μ
	L402	PU48530-101K	COIL	100μ
	L403	PU59153-101K	COIL	100μ
	L404	PU59153-101K	COIL	100μ
	L405	PU59988-181J	COIL	180μ
	L406	PU59153-101K	COIL	100μ
	L407	PU59153-101K	COIL	100μ
	L408	PU59988-120J	COIL	12μ
	L410	PU59988-151JY	COIL	150μ
	L411	PU48530-471K	COIL	470μ
	LPF40	PELN0566	LOW PASS FILTER	
		PU60737	LOW PASS FILTER	
		PU60812	LOW PASS FILTER	
	CN401	PU60910-12	CONNECTOR	
	or	PU60727-12	CONNECTOR	
	CN402	PU60727-10	CONNECTOR	

—COLOR SECTION—

IC501	PB20463A-01	C MOD BOARD ASSEMBLY
IC503	TC4S01F	IC
Q501	2SA1576(QRS)	TRANSISTOR
Q502	DTC144WU	TRANSISTOR
Q503	DTC144WU	TRANSISTOR, E EG
Q504	2SC4081(QRS)	TRANSISTOR
Q505	DTC144WU	TRANSISTOR
Q506	DTC144WU	TRANSISTOR
Q509	DTA124EU	TRANSISTOR
Q510	DTC144WU	TRANSISTOR
Q513	DTC114EU	TRANSISTOR
Q514	DTC144WU	TRANSISTOR
Q515	DTC144WU	TRANSISTOR
Q516	2SC4081(QRS)	TRANSISTOR
Q517	2SC4081(QRS)	TRANSISTOR
Q518	DTA114EU	TRANSISTOR
Q519	2SC4081(QRS)	TRANSISTOR
Q520	2SC4081(QRS)	TRANSISTOR
Q521	2SC4081(QRS)	TRANSISTOR
Q522	DTC144WU	TRANSISTOR, E EG
Q524	2SA1576(QRS)	TRANSISTOR
Q525	2SA1576(QRS)	TRANSISTOR

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	Q528	DTC144WU	TRANSISTOR	
	Q529	DTC144WU	TRANSISTOR	
	Q530	DTC144WU	TRANSISTOR	
	D503	DAN202U	DIODE,E EG	
	D505	DAN202U	DIODE	
	D507	DAN202U	DIODE	
	D508	DAP202U	DIODE,E EG	
	D511	DAN202U	DIODE	
	R503	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
	R504	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R505	QRD161J-471	RESISTOR	470Ω, 1/6W
	R506	QRSA08J-301YN	RESISTOR	300Ω, 1/10W
	R507	QRSA08J-911YN	RESISTOR	910Ω, 1/10W
	R508	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R509	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R511	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R512	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R513	QRSA08J-124YN	RESISTOR	120KΩ, 1/10W
	R514	QRSA08J-125YN	RESISTOR	1.2MΩ, 1/10W
	R515	QRSA08J-332YN	RESISTOR	3.3KΩ, 1/10W
	R516	QRSA08J-393YN	RESISTOR	39KΩ, 1/10W
	R518	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R519	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
	R520	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R522	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R523	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R524	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R526	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R527	QRSA08J-681YN	RESISTOR	680Ω, 1/10W
	R528	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R529	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R530	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R531	QRS188J-104YN	RESISTOR	100KΩ, 1/8W
	R532	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
	R533	QRSA08J-225YN	RESISTOR	2.2MΩ, 1/10W
	R535	QRD161J-122	RESISTOR	1.2KΩ, 1/6W
	R536	QRSA08J-182YN	RESISTOR	1.8KΩ, 1/10W
	R537	QRS188J-182YN	RESISTOR	1.8KΩ, 1/8W
	R538	QRS188J-102YN	RESISTOR	1KΩ, 1/8W
	R540	QRD161J-562	RESISTOR	5.6KΩ, 1/6W
	R541	QRSA08J-562YN	RESISTOR	5.6KΩ, 1/10W
	R542	QRSA08J-332YN	RESISTOR	3.3KΩ, 1/10W
	R543	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R544	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R545	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R546	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R547	QRSA08J-471YN	RESISTOR	470Ω, 1/10W
	R548	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R551	QRS188J-102YN	RESISTOR	1KΩ, 1/8W
	R552	QRS188J-102YN	RESISTOR	1KΩ, 1/8W
	R553	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R554	QRSA08J-471YN	RESISTOR	470Ω, 1/10W
	R555	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R556	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R557	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R563	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R564	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R565	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	C501	QCSA1HJ-100	CAPACITOR	10PF 50V
	C502	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C503	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C504	QCSA1HJ-220	CAPACITOR,EK	22PF, 50V
	C505	QCSA1HJ-220	CAPACITOR,E EG	22PF, 50V
	C506	QCFA1HZ-103	CAPACITOR,EK	0.001μF, 50V
	C507	QCSA1HJ-331	CAPACITOR	330PF, 50V
	C508	QCSA1HJ-121	CAPACITOR	120PF, 50V
	C509	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C510	QCSA1HJ-220	CAPACITOR	22PF 50V
	C511	QETC1HM-105	E CAPACITOR	1μF, 50V
	C512	QETC1EM-335	E CAPACITOR	3.3μF, 25V
	C513	QETC1HM-105	E CAPACITOR	1μF, 50V
	C514	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C517	QFN31HJ-823	M CAPACITOR	0.082μF, 50V
	C518	QCYA1HJ-822	CAPACITOR	0.0082μF, 50V
	C519	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C520	QCYA1HJ-822	CAPACITOR	0.0082μF, 50V
	C521	QETC1HM-335	E CAPACITOR	3.3μF, 50V
	C522	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C523	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C524	QETC1HM-224	E CAPACITOR	0.22μF, 50V
	C525	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C526	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C527	QETC1HM-105	E CAPACITOR	1μF, 50V
	C528	QETC1HM-104	E CAPACITOR	0.1μF, 50V
	C529	QETC1HM-105	E CAPACITOR	1μF, 50V
	C530	QETC1HM-105	E CAPACITOR	1μF, 50V
	C531	QCYA1HK-223	CAPACITOR	0.022μF, 50V
	C534	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C535	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C536	QCY81HK-103	CAPACITOR	0.01μF, 50V
	C537	QCSA1HJ-470	CAPACITOR	47PF, 50V
	C538	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C539	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C540	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C541	QCSA1HJ-330	CAPACITOR	33PF, 50V
	C542	QCSA1HJ-390	CAPACITOR	39PF, 50V
	C543	QFN31HJ-473	M CAPACITOR	0.047μF, 50V
	C544	QCSA1HJ-560	CAPACITOR,EK	56PF, 50V
	C545	QCSA1HJ-560	CAPACITOR,E EG	56PF, 50V
	C546	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C550	QCYA1HK-682	CAPACITOR	0.0068μF, 50V
	C551	QCYA1HK-222	CAPACITOR	0.0022μF, 50V
	C552	QCSA1HJ-820	CAPACITOR	82PF, 50V
	C553	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C554	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C561	QCYA1EK-104	CAPACITOR	0.1μF, 25V
	C563	QETC1HM-105	E CAPACITOR	1μF, 50V
	C564	QETC1HM-105	E CAPACITOR	1μF, 50V
	C565	QCFA1HZ-103	CAPACITOR,E EG	0.01μF, 50V
	L501	PU59153-101K	COIL	100μH

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	L502	PU59988-680J	COIL	68μH
	L503	PU59988-150J	COIL	15μH
	L504	PU59988-820J	COIL	82μH
	L505	PU59988-1R0JY	COIL	0.1μH
	L506	PU59988-100J	COIL	10μH
	L507	PU59988-330J	COIL	33μH
	L509	PU59153-101K	COIL	100μH
	L511	PU59153-101K	COIL	100μH
	L513	PU48530-101K	COIL	100μH
	L514	PU59988-390J	COIL	39μH
	L515	PU48530-222J	COIL	2200μH
	L516	PU59988-221JW	COIL	220μH
	L517	PU48530-821J	COIL	820μH
	EQ501	PU60811	EQUALIZER	
	LPF501	PU58022	LOW PASS FILTER	
	BPF501	PELN0396	BAND PASS FILTER	
	BPF502	PU60654	BAND PASS FILTER	
	or	PU60654-2	BAND PASS FILTER	
	CF501	PU57073	CERAMIC FILTER	
	DL501	PU58971-3	2H DELAY LINE	
⚠	X501	PU60653	CRYSTAL UNITS	
	TP406	PU57545	TEST PIN,X14,E EG	
		PU57545	TEST PIN,X13,EK	
	CN501	PU58844-3R	CONNECTOR	
	CN502	PU58844-8	CONNECTOR	
	CN503	PU58844-8	CONNECTOR	
	CN504	PU58844-3	CONNECTOR	
	CN506	PU60417-4	CONNECTOR	

—SECAM DETECTOR SECTION—

	IC601	BA7106LS	IC,E EG	
	Q601	DTC144WU	TRANSISTOR,EG	
	R601	QRSA08J-822YN	RESISTOR,E EG	8.2KΩ,1/10W
	R602	QRSA08J-273YN	RESISTOR,E EG	27KΩ,1/10W
	R603	QRSA08J-914YN	RESISTOR,E EG	910KΩ,1/10W
	R604	QRSA08J-104YN	RESISTOR,E EG	100KΩ,1/10W
	C601	QCSA1HJ-471	CAPACITOR,E EG	470pF,50V
	C602	QCSA1HJ-391	CAPACITOR,E EG	390pF,50V
	C603	QCTA1CH-470	CAPACITOR,E EG	47pF,16V
	C604	QCSA1HJ-5R0	CAPACITOR,E EG	5pF,50V
	C606	QCYA1HK-103	CAPACITOR,E EG	0.01μF,50V
	C607	QETC0JM-107	E CAPACITOR,E EG	100μF,6.3V
	C608	QETC1CM-106	E CAPACITOR,E EG	10μF,16V
	C609	QETC1EM-335	E CAPACITOR,E EG	3.3μF,25V
	C610	QCSA1HJ-471	CAPACITOR,E EG	470pF,50V
	C612	QCFA1HZ-103	CAPACITOR,E EG	0.01μF,50V
	C613	QCFA1HZ-103	CAPACITOR,E EG	0.01μF,50V
	C614	QCFA1HZ-103	CAPACITOR,E EG	0.01μF,50V
	C615	QCYA1HK-472	CAPACITOR,E EG	0.0047μF,50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C616	QCYA1HK-103	CAPACITOR,E EG	0.01μF,50
	L601	PU48530-101K	COIL	100μ
	LC601	PU60655	V COIL,SECAM DET,E EG	

TERMINAL BOARD ASSEMBLY 〈06〉

	CN901	PU59513-2R	CONNECTOR
	CN902	PU59513-3	CONNECTOR,EK E
		PU59513-5	CONNECTOR,EG
	CN903	PU59513-3	CONNECTOR

TUNER/IF BOARD ASSEMBLY 〈07〉

	PWBA	PB10392F1	IF BOARD ASSEMBLY,E EG	
		PB10392G1	IF BOARD ASSEMBLY,EK	
	IC1	M51365SP	IC	
	Q1	2SA1532(C)	TRANSISTOR	
	Q2	2SC3354	TRANSISTOR	
	Q3	2SC1317(RS)	TRANSISTOR	
	Q4	2SA933S(S)	TRANSISTOR	
	Q5	2SD1819A(RS)	TRANSISTOR	
	Q6	FMS2	TRANSISTOR	
	Q7	2SD1819A(RS)	TRANSISTOR	
	Q8	2SA1532(C)	TRANSISTOR,E EG	
	Q10	2SC3354	TRANSISTOR,E EG	
	Q11	2SC3311A(RS)	TRANSISTOR	
	Q12	DTC144EU	TRANSISTOR,E EG	
	Q13	DTC144EU	TRANSISTOR,E EG	
	Q16	2SK381(C)	FE TRANSISTOR,E EG	
	D1	MTZ10D	ZENER DIODE	
	D6	DA204U	DIODE	
	R1	NRSA63J-750N	RESISTOR	75Ω,1/16
	R4	NRSA63J-392N	RESISTOR	3.9KΩ,1/16
	R5	NRSA63J-151N	RESISTOR,E EG	150Ω,1/16
	R6	NRSA63J-272N	RESISTOR	2.7KΩ,1/16
	R7	NRSA63J-222N	RESISTOR	2.2KΩ,1/16
	R8	NRSA63J-681N	RESISTOR	680Ω,1/16
	R10	QRSA08J-271YN	RESISTOR,EK	270Ω,1/10
		QRSA08J-471YN	RESISTOR,E EG	470Ω,1/10
	R11	NRSA63J-120N	RESISTOR,EK	12Ω,1/16
		NRSA63J-680N	RESISTOR,E EG	68Ω,1/16
	R14	NRSA63J-101N	RESISTOR	100Ω,1/16
	R15	QRSA08J-102YN	RESISTOR	1KΩ,1/10
	R17	NRSA63J-562N	RESISTOR	5.6KΩ,1/16
	R18	NRSA63J-332N	RESISTOR	3.3KΩ,1/16
	R19	NRSA63J-222N	RESISTOR	2.2KΩ,1/16

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R20	NRSA63J-222N	RESISTOR	2.2KΩ, 1/16W
	R21	QVZ3518-472	V RESISTOR, RF AGC	4.7KΩ
	or	QVZ3523-472	V RESISTOR, RF AGC	4.7KΩ
	R22	NRSA63J-824N	RESISTOR	820KΩ, 1/16W
	R24	NRSA63J-821N	RESISTOR, E EG	820Ω, 1/16W
	R31	NRSA63J-182N	RESISTOR, E EG	1.8KΩ, 1/16W
	R32	NRSA63J-102N	RESISTOR, E EG	1.0kΩ, 1/16W
	R33	NRSA63J-393N	RESISTOR, E EG	39KΩ, 1/16W
	R34	NRSA63J-470N	RESISTOR	47Ω, 1/16W
	R35	NRSA63J-561N	RESISTOR	560Ω, 1/16W
	R36	NRSA63J-561N	RESISTOR	560Ω, 1/16W
	R37	NRSA63J-111N	RESISTOR, E EG	110Ω, 1/16W
		NRSA63J-201N	RESISTOR, EK	200Ω, 1/16W
	R38	NRSA63J-182N	RESISTOR	1.8KΩ, 1/16W
	R39	QRSA08J-182Y	RESISTOR, EK	1.8KΩ, 1/16W
		QRSA08J-272Y	RESISTOR, E EG	2.7KΩ, 1/16W
	R40	QVZ3518-103	V RESISTOR, COL LEVEL	10KΩ,
	R45	NRSA63J-471N	RESISTOR	470Ω, 1/16W
	R46	NRSA63J-104N	RESISTOR	100KΩ, 1/16W
	R47	NRSA63J-153N	RESISTOR	15KΩ, 1/16W
	R48	NRSA63J-392N	RESISTOR	3.9KΩ, 1/16W
	R49	NRSA63J-103N	RESISTOR	10KΩ, 1/16W
	R50	NRSA63J-821N	RESISTOR	820Ω, 1/16W
	R51	NRSA63J-223N	RESISTOR	22KΩ, 1/16W
	R52	NRSA63J-223N	RESISTOR	22KΩ, 1/16W
	R53	NRSA63J-103N	RESISTOR	10KΩ, 1/16W
	R54	NRSA63J-822N	RESISTOR	8.2KΩ, 1/16W
	R57	NRSA63J-153N	RESISTOR	15KΩ, 1/16W
	R62	NRSA63J-392N	RESISTOR, E EG	3.9KΩ, 1/16W
	R64	NRSA63J-182N	RESISTOR, E EG	1.8KΩ, 1/16W
	R65	QRSA08J-221YN	RESISTOR, E EG	220Ω, 1/10W
	R66	NRSA63J-222N	RESISTOR, E EG	2.2kΩ, 1/16W
	R71	NRSA63J-681N	RESISTOR, E EG	680Ω, 1/16W
	R72	QRSA08J-560YN	RESISTOR, E EG	56Ω, 1/10W
	R73	NRSA63J-331N	RESISTOR, E EG	330Ω, 1/16W
	R84	NRSA63J-393N	RESISTOR, E EG	39KΩ, 1/16W
	R85	NRSA63J-752N	RESISTOR, E EG	7.5KΩ, 1/16W
	R87	NRSA63J-222N	RESISTOR	2.2KΩ, 1/16W
	R92	NRSA63J-222N	RESISTOR	2.2KΩ, 1/16W
	R93	NRSA63J-222N	RESISTOR	2.2KΩ, 1/16W
	R94	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
	R95	NRSA63J-680N	RESISTOR	68Ω, 1/16W
	R99	NRSA63J-105N	RESISTOR, E EG	1MΩ, 1/16W
	C1	NCS31HJ-100A	CAPACITOR	10PF, 50V
	C2	NCT06CH-7R0A	CAPACITOR, E EG	7PF, 50V
	C3	QCTA1RH-101	CAPACITOR, E EG	100PF, 50V
	C4	NCT06CH-6R0A	CAPACITOR, E EG	6PF, 50V
	C5	NCB31HK-102A	CAPACITOR	0.001μF, 50V
	C7	NCB31HK-102A	CAPACITOR	0.001μF, 50V
	C8	NCB31HK-102A	CAPACITOR	0.001μF, 50V
	C9	NCB31HK-222A	CAPACITOR	0.0022μF, 50V
	C10	QEKF1CM-107	E CAPACITOR	100μF, 16V
	C11	NCF31HZ-103A	CAPACITOR	0.01μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C13	NCB31HK-222A	CAPACITOR	0.0022μF, 50V
	C14	PU57601-474ME	E CAPACITOR	0.47μF
	C15	QEKF1CM-336	E CAPACITOR, E EG	33μF
	C16	NCB31HK-222A	CAPACITOR, E EG	2.2μF
	C17	QCYA1HK-223	CAPACITOR, E EG	22μF
	C19	NCF31HZ-103A	CAPACITOR, E EG	0.01μF, 50V
	C20	NCB31HK-102A	CAPACITOR, E EG	0.001μF, 50V
	C21	NCS31HJ-101A	CAPACITOR, E EG0.	0001μF, 50V
	C22	QEKF1CM-106	E CAPACITOR, E EG	100μF, 16V
	C24	QEKF1HM-105	E CAPACITOR	1μF, 50V
	C25	NCB31HK-222A	CAPACITOR	0.0022μF, 50V
	C26	QFN31HK-222	M CAPACITOR	0.0022μF, 50V
	C27	QEKF1HM-474	E CAPACITOR	0.47μF, 50V
	C29	NCS31HJ-470A	CAPACITOR	47PF 50V
	C31	QEKF1HM-335	E CAPACITOR	3.3μF, 50V
	C32	NCF31HZ-103A	CAPACITOR	0.01μF, 50V
	C33	QEKF1HM-474	E CAPACITOR	0.47μF, 50V
	C41	NCB31HK-102A	CAPACITOR, E EG	0.0001μF, 50V
	C43	NCB31HK-222A	CAPACITOR, E EG	0.0022μF, 50V
	C44	NCB31HK-102A	CAPACITOR, E EG	0.0001μF, 50V
	C45	QCYA1HK-102	CAPACITOR, E EG	0.0001μF, 50V
	C46	NCB31HK-102A	CAPACITOR, E EG	0.0001μF, 50V
	C50	QEKF1CM-336	E CAPACITOR	33μF, 16V
	C56	QEKF1CM-336	E CAPACITOR	33μF, 16V
	C63	NCB31HK-102A	CAPACITOR	0.001μF, 50V
	C64	NCB31HK-391A	CAPACITOR	390PF, 50V
	L1	PU60025-R82	COIL, E EG	0.82μH
	L2	PU60025-R56	COIL, EK	0.56μH
		PU60025-1R0	COIL, E EG	1.0μH
	L3	PU60025-R82	COIL, EK	8.2μH
		PU60025-1R2	COIL, E EG	1.2μH
	L4	PU59152-100J	COIL, EK	10μH
		PU59152-8R2J	COIL, E EG	8.2μH
	L5	PU59152-220J	COIL	22μH
	L6	PU59152-6R8J	COIL	6.8μH
	L7	PU59152-R22K	COIL	0.22μH
	L9	PU59152-6R8J	COIL	6.8μH
	L11	PU59152-6R8J	COIL	6.8μH
	L12	PU59152-6R8J	COIL	6.8μH
	CF1	PU49295-2	N FILTER, E EG	
	CF4	PU49295	CERAMIC FILTER, E EG	
	CF7	PEVB0345	C TRAP, E EG	
		PU32990-3	CERAMIC FILTER, EK	
	SAW1	PU60804	SAW FILTER, E EG	
		PU60875	SAW FILTER, EK	
	SAW2	PU60765	SAW FILTER, E EG	
	T1	PELN0337	COIL, E EG	
	T2	PU60497	IF.TRANSFORMER, E EG	
		PU60498	IF.TRANSFORMER, EK	
	T4	PELN0363	COIL, E EG	
	T5	PU60046	IF.TRANSFORMER	
	T8	PU60259	COIL, EG	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	CN1	PU58844-102	CONNECTOR
	CN2	PU58844-102R	CONNECTOR

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⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D12	HZ2BLL	ZENER DIODE	
	D13	HZ2BLL	ZENER DIODE	
	D14	1SS133	DIODE	
	D15	DAN202U	DIODE,EK	
	D16	DAN202U	DIODE	
	D17	DAN202U	DIODE	
	D22	1SS133	DIODE	
	or	MA165	DIODE	
	D23	1SS133	DIODE	
	or	MA165	DIODE	
	D24	1SS133	DIODE	
	or	MA165	DIODE	
	R1	QRSA08J-100YN	RESISTOR	10Ω, 1/10W
	R2	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R3	QRSA08J-820YN	RESISTOR	82Ω, 1/10W
	R12	QRSA08J-0R0Y	RESISTOR	0.0Ω, 1/10W
	R15	QRSA08J-333YN	RESISTOR,EK	33KΩ, 1/10W
	R16	QRSA08J-333YN	RESISTOR,EK	33KΩ, 1/10W
	R17	QRSA08J-102YN	RESISTOR,EK	1.0KΩ, 1/10W
	R18	QRSA08J-0R0Y	RESISTOR,EK	0.0Ω, 1/10W
	R22	QRSA08J-362YN	RESISTOR	3.6KΩ, 1/10W
	R23	QRSA08J-273YN	RESISTOR	27KΩ, 1/10W
	R24	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R25	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
	R26	QRSA08J-0R0Y	RESISTOR,E EG	0.0Ω, 1/10W
	R29	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R30	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R31	QRSA08J-4R7YN	RESISTOR	0.47Ω, 1/10W
	R33	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R34	QRSA08J-682YN	RESISTOR	6.8KΩ, 1/10W
	R35	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R36	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R37	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R40	QRSA08J-0R0Y	RESISTOR	0.0Ω, 1/10W
	R41	QRSA08J-123YN	RESISTOR	12KΩ, 1/10W
	R42	QRSA08J-123YN	RESISTOR	12KΩ, 1/10W
	R45	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R46	QRSA08J-393YN	RESISTOR	39KΩ, 1/10W
	R51	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R52	QRSA08J-182YN	RESISTOR	1.8KΩ, 1/10W
	R53	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R54	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
	R55	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R56	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R57	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
	R58	QRSA08J-0R0Y	RESISTOR	0.0Ω, 1/10W
	R62	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R63	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R64	QRSA08J-823YN	RESISTOR	82KΩ, 1/10W
	R65	QRSA08J-680YN	RESISTOR	68Ω, 1/10W
	R66	QRSA08J-682YN	RESISTOR	6.8KΩ, 1/10W
	R67	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R68	QRSA08J-682YN	RESISTOR	6.8KΩ, 1/10W
	R69	QRSA08J-680YN	RESISTOR	68Ω, 1/10W
	R70	QRSA08J-823YN	RESISTOR	82KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R71	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R72	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R73	QRSA08J-132YN	RESISTOR	1.3KΩ, 1/10W
	R74	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R75	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R76	QRSA08J-472YN	RESISTOR	4.7KΩ, 1/10W
	R77	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R78	QRSA08J-273YN	RESISTOR	27KΩ, 1/10W
	R79	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R80	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R81	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R82	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R83	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R84	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R85	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R86	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R87	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R88	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R91	QRSA08J-0R0Y	RESISTOR	0.0Ω, 1/10W
	R92	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
	R93	QRSA08J-0R0Y	RESISTOR	0.0Ω, 1/10W
	R94	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R95	QRSA08J-272YN	RESISTOR	2.7KΩ, 1/10W
	R103	QRSA08J-562YN	RESISTOR	5.6KΩ, 1/10W
	R104	QRSA08J-333YN	RESISTOR,EK	33KΩ, 1/10W
	R106	QRSA08J-562YN	RESISTOR	5.6KΩ, 1/10W
	R108	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R110	QRSA08J-472YN	RESISTOR	4.7KΩ, 1/10W
	R111	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R114	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R115	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R116	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R117	QRD161J-560	RESISTOR	56Ω, 1/6W
	C1	QCYA1HK-222	CAPACITOR	0.0022μF, 50V
	C2	QCYA1HK-332	CAPACITOR	0.0033μF, 50V
	C3	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C4	QCSA1HJ-331	CAPACITOR	330PF 50V
	C5	QFV81HJ-333	TF CAPACITOR	0.0033μF, 50V
	C6	QETC1CM-106	E CAPACITOR	10μF, 16V
	C9	QETC1HM-225	E CAPACITOR	2.2μF, 50V
	C10	QETB1AM-336	E CAPACITOR	33μF, 10V
	C11	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C15	QETC1CM-106	E CAPACITOR,EK	10μF, 16V
	C16	QETC1CM-106	E CAPACITOR,EK	10μF, 16V
	C21	QETC1CM-476	E CAPACITOR	47μF, 16V
	C25	QETC1CM-476	E CAPACITOR	47μF, 16V
	C26	QETC1CM-476	E CAPACITOR	47μF, 16V
	C27	QETC1CM-106	E CAPACITOR	10μF, 16V
	C28	QENC1CM-106	NP E CAPACITOR	10μF, 16V
	C31	QETC1HM-225	E CAPACITOR	2.2μF, 50V
	C32	QETC1EM-475	E CAPACITOR	4.7μF, 25V
	C34	QFV71HJ-223	TF CAPACITOR	0.02μF, 50V
	C35	QCYA1HK-682	CAPACITOR	0.0068μF, 50V
	C36	QCYA1HK-153	CAPACITOR	0.015μF, 50V
	C37	QCYA1HK-682	CAPACITOR	0.0068μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C38	QETC1CM-106	E CAPACITOR	10μF, 16V
	C39	QETC1AM-476	E CAPACITOR	47μF, 10V
	C40	QE521CM-106R	NP E CAPACITOR	10μF, 16V
	C41	QENC1CM-106	NP E CAPACITOR	10μF, 16V
	C42	QETC1CM-226	E CAPACITOR	22μF, 16V
	C43	QETC1CM-106	E CAPACITOR	10μF, 16V
	C44	QETC1AM-336	E CAPACITOR	33μF, 10V
	C45	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C46	QCSA1HJ-102	CAPACITOR0	.001μF, 50V
	C47	QETC1AM-336	E CAPACITOR	33μF, 10V
	C48	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C49	QETB1CM-226	E CAPACITOR	22μF, 16V
	C51	QE531CM-106ZR	NP E CAPACITOR	10μF, 16V
	C52	QETC1AM-476	E CAPACITOR	47μF, 10V
	C53	QETC1CM-106	E CAPACITOR	10μF, 16V
	C54	QETC1CM-476	E CAPACITOR	47μF, 16V
	C55	QETC1CM-476	E CAPACITOR	47μF, 16V
	C56	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C57	QE231CM-476ZR	E CAPACITOR	47μF, 16V
	C58	QETC1CM-476	E CAPACITOR	47μF, 16V
	C60	QCYA1HK-102	CAPACITOR	0.001μF, 50V
	C62	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C63	QETC1CM-336	E CAPACITOR	33μF, 16V
	C64	QETC1CM-336	E CAPACITOR	33μF, 16V
	C65	QETC1CM-106	E CAPACITOR	10μF, 16V
	C66	QETC1HM-105	E CAPACITOR	1μF, 50V
	C67	QETC1CM-106	E CAPACITOR	10μF, 16V
	C70	QCYA1HK-102	CAPACITOR0	.001μF, 50V
	C71	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C72	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C75	QCYA1HK-153	CAPACITOR	0.015μF, 50V
	C76	QCYA1EK-223	CAPACITOR	0.022μF, 25V
	C79	QCC11CJ-104	CAPACITOR	0.1μF, 16V
	or	QCC11EJ-104	CAPACITOR	0.1μF, 25V
	C81	QCYA1HK-221	CAPACITOR	220PF 50V
	C82	QCYA1HK-221	CAPACITOR	220PF 50V
	C83	QCSA1HJ-681	CAPACITOR,E EG	680PF 50V
	C84	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C85	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C86	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	L1	PU58308-472J	COIL	4700μH
	L2	PU48530-181J	COIL	180μH
	L3	PU48530-101J	COIL	100μH
	L5	PU48530-101J	COIL	100μH
	BPF1	PU60610	BPF(1.4MHZ)	
	BPF2	PU60611	BPF(1.8MHZ)	
⚠	CF1	PEVB0352	RESONATOR	
⚠	T1	PELN0351	OSC TRANSFORMER	
⚠	or	PELN0562	OSC TRANSFORMER	
⚠	T2	PELN0340	OSC TRANSFORMER	
⚠	or	PELN0532	OSC TRANSFORMER	
	SPC1	PQM30029-149	SPACER	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	CN1	PU58844-8	CONNECTOR
	CN2	PU58844-2	CONNECTOR
	CN3	PU60417-7	CONNECTOR
	CN4	PU58844-5	CONNECTOR
	CN5	PU58844-4	CONNECTOR
	CN6	PU58844-2	CONNECTOR,EK
		PU58844-3	CONNECTOR,EK
		PU58844-5	CONNECTOR,E EG
	CN7	PU60417-3	CONNECTOR
	CN8	PEMC0757-115	HOUSING
	CN9	PEMC0757-111	HOUSING
	CN10	PEMC0757-115	HOUSING
	CN11	PEMC0748-110	CONNECTOR
	CN12	PEMC0748-110	CONNECTOR
	CN13	PEMC0748-110	CONNECTOR
⚠	CP1	ICP-F10	CIRCUIT PROTECTOR
⚠	CP2	ICP-F10	CIRCUIT PROTECTOR
⚠	CP3	ICP-F10	CIRCUIT PROTECTOR

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VIDEO INTERFACE BOARD ASSEMBLY 〈10〉

PWBA	PB10579B1-01	V.INT BOARD ASSEMBLY,E EG
	PB10579C1	V.INT BOARD ASSEMBLY,EK

—I&O SW SECTION—

IC1	JCP0021	IC
IC2	BA7649	IC
or	BA7649A	IC,E EG
IC3	BA7644N	IC
or	BA7644AN	IC,E EG
IC7	LVA523SA	IC
IC8	LVA522SA	IC,E EG
IC9	TC4S81F	IC
IC10	TC4S81F	IC
IC12	MC74HC04AN	IC
or	CD74HC04E	IC
or	TC74HC04AP	IC
IC13	TC4S71F	IC
Q1	2SA1576(QRS)	TRANSISTOR
Q2	DTC144EU	TRANSISTOR
Q3	DTC144WU	TRANSISTOR
Q4	DTC144WU	TRANSISTOR
Q5	DTA114EU	TRANSISTOR
Q6	2SC4081(QRS)	TRANSISTOR
Q7	2SA1576(QRS)	TRANSISTOR
Q9	2SA1577(QR)	TRANSISTOR
Q10	2SA1577(QR)	TRANSISTOR
Q11	2SA1577(QR)	TRANSISTOR
Q12	2SA1576(QRS)	TRANSISTOR
Q13	2SA1576(QRS)	TRANSISTOR
Q14	2SA1577(QR)	TRANSISTOR
Q15	2SA1576(QRS)	TRANSISTOR
Q19	2SD1468S(RS)	TRANSISTOR

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	Q21	2SA1576(QRS)	TRANSISTOR
	Q22	2SA1576(QRS)	TRANSISTOR
	Q23	2SC4081(QRS)	TRANSISTOR
	Q24	DTC144WU	TRANSISTOR,E EG
	Q25	DTC144WU	TRANSISTOR
	Q26	DTC144EU	TRANSISTOR,E EG
	Q27	2SA1576(QRS)	TRANSISTOR
	Q29	DTC144WU	TRANSISTOR
	Q30	DTC144WU	TRANSISTOR
	Q31	2SA1576(QRS)	TRANSISTOR
	Q32	2SC4081(QRS)	TRANSISTOR
	Q33	2SC4081(QRS)	TRANSISTOR
	Q34	2SA1576(QRS)	TRANSISTOR
	Q35	2SC4081(QRS)	TRANSISTOR
	Q36	2SA1576(QRS)	TRANSISTOR
	Q37	2SA1576(QRS)	TRANSISTOR
	Q38	2SC4081(QRS)	TRANSISTOR
	Q39	2SC4081(QRS)	TRANSISTOR
	Q46	DTC144EU	TRANSISTOR
	Q48	DTC144EU	TRANSISTOR
	Q49	DTC144WU	TRANSISTOR
	Q52	2SA1576(QRS)	TRANSISTOR
	Q59	DTA114EU	TRANSISTOR
	Q60	DTC144EU	TRANSISTOR
	Q61	2SK381(C)	FE TRANSISTOR
	D1	DAN202U	DIODE
	D2	DAP202U	DIODE
	D3	DAP202U	DIODE
	D4	DAN202U	DIODE
	D5	DAP202U	DIODE
	D6	DAN202U	DIODE
	D7	DAN202U	DIODE
	D8	DAN202U	DIODE
	D9	DAN202U	DIODE
	D10	DAP202U	DIODE
	D11	DAP202U	DIODE
	D12	DAP202U	DIODE
	D14	DAP202U	DIODE
	D16	DAN202U	DIODE
	D17	DAN202U	DIODE
	D20	DAN202U	DIODE,E EG
	D21	DAN202U	DIODE,E EG
	D22	DAN202U	DIODE,E EG
	D24	MTZ8.2BT-77	ZENER DIODE
	D25	DA204U	DIODE
	D26	DAN202U	DIODE
	D27	DA204U	DIODE
	D28	DAN202U	DIODE
	D29	DAN202U	DIODE
	D30	1SS133	DIODE
	or	MA165	DIODE
	D31	DAN202U	DIODE
	D32	DAP202U	DIODE
	D33	DAP202U	DIODE
	D34	DAP202U	DIODE

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	D35	DAN202U	DIODE	
	D38	DAN202U	DIODE	
	D39	DAN202U	DIODE	
	D40	DAN202U	DIODE,E EG	
	D41	DAN202U	DIODE	
	D46	1SS133	DIODE	
	or	MA165	DIODE	
	D47	1SS133	DIODE	
	or	MA165	DIODE	
	D48	1SS133	DIODE	
	or	MA165	DIODE	
	D50	DAN202U	DIODE	
	TP	PU57545	TEST PIN	
	R2	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W
	R3	QRD161J-103	RESISTOR	10KΩ.1/6W
	R4	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R5	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R6	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R7	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R8	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R9	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R10	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R11	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R12	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R13	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R14	QRSA08J-105YN	RESISTOR	1.0MΩ.1/10W
	R15	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W
	R17	QRD123J-391SX	RESISTOR	390Ω.1/2W
	R18	QRD123J-391SX	RESISTOR	390Ω.1/2W
	R19	QRD123J-391SX	RESISTOR	390Ω.1/2W
	R20	QRSA08J-472YN	RESISTOR	4.7KΩ.1/10W
	R21	QRSA08J-102YN	RESISTOR	1KΩ.1/10W
	R22	QRSA08J-102YN	RESISTOR	1KΩ.1/10W
	R23	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W
	R24	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R25	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R26	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R27	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R28	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R29	QRSA08J-750YN	RESISTOR	75Ω.1/10W
	R31	QRSA08J-123YN	RESISTOR	12KΩ.1/10W
	R32	QRSA08J-101YN	RESISTOR	100Ω.1/10W
	R34	QRD123J-391SX	RESISTOR	390Ω.1/2W
	R35	QRSA08J-103YN	RESISTOR	10KΩ.1/10W
	R36	QVZ3523-103AZ	V RESISTOR,EE Y LEVEL	10KΩ
	or	QVZ3518-103	V RESISTOR,EE Y LEVEL	10KΩ
	or	QVZ3518-103AZ	V RESISTOR,EE Y LEVEL	10KΩ
	or	QVZ3523-103	V RESISTOR,EE Y LEVEL	10KΩ
	R37	QRD161J-223	RESISTOR	22KΩ.1/6W
	R42	QRSA08J-242YN	RESISTOR	2.4KΩ.1/10W
	R43	QRSA08J-470YN	RESISTOR	47Ω.1/10W
	R44	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W
	R45	QRSA08J-470YN	RESISTOR	47Ω.1/10W
⚠	R46	QRSA08J-271YN	RESISTOR	270Ω.1/10W
	R49	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W
	R50	QRSA08J-222YN	RESISTOR	2.2KΩ.1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R51	QRSA08J-182YN	RESISTOR	1.8KΩ, 1/10W
	R52	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R53	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R54	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R55	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R56	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R57	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R58	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R59	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R60	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R61	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R62	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R63	QVZ3523-333AZ	V RESISTOR, N PB Y LEVEL	33KΩ
	or	QVZ3518-333	V RESISTOR, N PB Y LEVEL	33KΩ
	or	QVZ3518-333AZ	V RESISTOR, N PB Y LEVEL	33KΩ
	or	QVZ3523-333	V RESISTOR, N PB Y LEVEL	33KΩ
	R64	QVZ3523-332AZ	V RESISTOR, S PB Y LEBEL	3.3KΩ
	or	QVZ3518-332	V RESISTOR, S PB Y LEVEL	3.3KΩ
	or	QVZ3518-332AZ	V RESISTOR, S PB Y LEVEL	3.3KΩ
	or	QVZ3523-332	V RESISTOR, S PB Y LEVEL	3.3KΩ
	R65	QRSA08J-682YN	RESISTOR	6.8KΩ, 1/10W
	R66	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R67	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
	R68	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
	R69	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R70	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R71	QRSA08J-183YN	RESISTOR	18KΩ, 1/10W
	R72	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R73	QRSA08J-183YN	RESISTOR	18KΩ, 1/10W
	R74	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R76	QRSA08J-104YN	RESISTOR, E EG	100KΩ, 1/10W
	R77	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R78	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R79	QRSA08J-182YN	RESISTOR	1.8KΩ, 1/10W
	R80	QRSA08J-132YN	RESISTOR	1.3KΩ, 1/10W
	R81	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R82	QRSA08J-105YN	RESISTOR	1.0MΩ, 1/10W
	R83	QRSA08J-183YN	RESISTOR	18KΩ, 1/10W
	R84	QRSA08J-392YN	RESISTOR	3.9KΩ, 1/10W
	R85	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R86	QRSA08J-182YN	RESISTOR	1.8KΩ, 1/10W
	R87	QRSA08J-431YN	RESISTOR	430Ω, 1/10W
	R88	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R89	QRSA08J-271YN	RESISTOR	270Ω, 1/10W
	R90	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R91	QRSA08J-821YN	RESISTOR	820Ω, 1/10W
	R92	QRSA08J-683YN	RESISTOR	68KΩ, 1/10W
	R93	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R94	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R95	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R96	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R97	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R98	QRSA08J-162YN	RESISTOR	1.6KΩ, 1/10W
	R99	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R100	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R101	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R104	QRSA08J-103YN	RESISTOR, E EG	10KΩ, 1/10W
	R105	QRSA08J-472YN	RESISTOR, E EG	4.7KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R106	QRSA08J-101YN	RESISTOR, E EG	100Ω, 1/10W
	R107	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R108	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R109	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R110	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
	R112	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R113	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
	R114	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R122	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R125	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R127	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R128	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R131	QRSA08J-183YN	RESISTOR	18KΩ, 1/10W
	R132	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R133	QRSA08J-303YN	RESISTOR	30KΩ, 1/10W
	R134	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R138	QRD161J-562	RESISTOR	5.6KΩ, 1/6W
	R139	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R142	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
	R143	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
	R144	QRSA08J-564YN	RESISTOR	560KΩ, 1/10W
	R145	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	C1	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C2	QETC1HM-105	E CAPACITOR	1μF, 50V
	C3	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C4	QETC1HM-105	E CAPACITOR	1μF, 50V
	C5	QENC1HM-105	NP E CAPACITOR	1μF, 50V
	C6	QETC1HM-105	E CAPACITOR	1μF, 50V
	C7	QETC1HM-105	E CAPACITOR	1μF, 50V
	C9	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C10	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C11	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C14	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C15	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C16	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C17	QCVC1CN-103	CAPACITOR	0.01μF, 16V
	C18	QETC1CM-476	E CAPACITOR	47μF, 16V
	C19	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C21	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C22	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C23	QETC1CM-476	E CAPACITOR	47μF, 16V
	C24	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C25	QETC1CM-476	E CAPACITOR	47μF, 16V
	C26	QETC1AM-226	E CAPACITOR	22μF, 10V
	C27	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C28	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C29	QETC0JM-477	E CAPACITOR	470μF, 6.3V
	C30	QETC0JM-477	E CAPACITOR	470μF, 6.3V
	C32	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C33	QETC1EM-106	E CAPACITOR	10μF, 25V
	C34	QETC1EM-106	E CAPACITOR	10μF, 25V
	C35	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C36	QETC1CM-476	E CAPACITOR	47μF, 16V
	C37	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C38	QETC1CM-476	E CAPACITOR	47μF, 16V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C39	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C40	QETC1HM-105	E CAPACITOR	1μF, 50V
	C47	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C48	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C49	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C50	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C51	QETC1EM-335	E CAPACITOR	3.3μF, 25V
	C52	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C53	QETC1HM-224	E CAPACITOR	0.22μF, 50V
	C54	QCYA1HK-682	CAPACITOR	0.0068μF, 50V
	C55	QETC0JM-107	E CAPACITOR	100μF, 6.3V
	C56	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C57	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C58	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C59	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C60	QCYA1HK-682	CAPACITOR	0.0068μF, 50V
	C61	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C62	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C63	QETC1HM-105	E CAPACITOR	1μF, 50V
	C64	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C65	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C66	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C68	QETC1HM-105	E CAPACITOR	1μF, 50V
	C69	QETC1HM-105	E CAPACITOR	1μF, 50V
	C70	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C71	QETC1CM-106	E CAPACITOR	10μF, 16V
	C72	QETC1HM-225	E CAPACITOR	2.2μF, 50V
	C73	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C74	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C76	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C77	QETC1CM-107	E CAPACITOR	100μF, 16V
	C78	QETC1CM-476	E CAPACITOR	47μF, 16V
	C79	QETC1CM-106	E CAPACITOR	10μF, 16V
	C80	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C81	QETC1EM-335	E CAPACITOR	3.3μF, 25V
	C82	QCSA1HJ-330	CAPACITOR	33PF, 50V
	C83	QCSA1HJ-470	CAPACITOR	47PF, 50V
	C87	QETC1EM-475	E CAPACITOR, E EG	4.7μF, 25V
	C88	QETC0JM-476	E CAPACITOR	47μF, 6.3V
	C89	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C90	QCFA1HZ-103	CAPACITOR, E EG	0.01μF, 50V
	C91	QCFA1HZ-103	CAPACITOR, E EG	0.01μF, 50V
	C92	QCSA1HJ-470	CAPACITOR, E EG	470PF, 50V
	C94	QCYA1EK-104	CAPACITOR	0.1μF, 25V
	C97	QCYA1EK-104	CAPACITOR	0.1μF, 25V
	C98	QCYA1EK-104	CAPACITOR	0.1μF, 25V
	C105	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	L1	PU48530-101K	COIL	100μH
	L2	PU48530-101K	COIL	100μH
	L3	PU48530-101K	COIL	100μH
	L4	PU48530-101K	COIL	100μH
	L5	PU48530-101K	COIL	100μH
	L7	PU48530-101K	COIL	100μH
	L8	PU59988-100J	COIL	100μH
	L10	PU48530-101K	COIL	100μH

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	L11	PU59153-101K	COIL	100μH
	L12	PU48530-101K	COIL	100μH
	L13	PU48530-101K	COIL	100μH
	EQ1	PU60714	EQUALIZER, E EG	
	LC1	PU60813	LCF	
	CN1	PU60417-5	CONNECTOR	
	CN2	PU58844-2	CONNECTOR	
	CN3	PU58844-6	CONNECTOR	
	CN4	PU60417-3	CONNECTOR	
	CN5	PEMC0749-110	CONNECTOR	
	CN6	PEMC0749-110	CONNECTOR	
	CN7	PEMC0749-110	CONNECTOR	
	CN8	PU58844-7	CONNECTOR	
	CN9	PU58844-4	CONNECTOR	
	CN12	PU58844-4R	CONNECTOR	
	CN19	PU58844-3	CONNECTOR	
	CN20	PU60417-3	CONNECTOR, EK	
	CN25	PU60417-4	CONNECTOR	
	CN27	PU58844-2	CONNECTOR	

—Y/C SEPARATOR SECTION—

IC201	VC2063S	IC	
Q201	2SA1576(QRS)	TRANSISTOR	
Q202	2SC4081(QRS)	TRANSISTOR	
Q203	2SA1576(QRS)	TRANSISTOR	
Q204	2SC4081(QRS)	TRANSISTOR	
Q205	2SC4081(QRS)	TRANSISTOR	
Q206	2SC4081(QRS)	TRANSISTOR	
Q207	2SC4081(QRS)	TRANSISTOR	
Q208	2SA1576(QRS)	TRANSISTOR	
Q209	2SC4081(QRS)	TRANSISTOR	
Q210	DTC144EU	TRANSISTOR	
Q211	DTA144EU	TRANSISTOR	
R201	QRD161J-101	RESISTOR	100Ω, 1/6W
R202	QRSA08J-472YN	RESISTOR	4.7KΩ, 1/10W
R203	QRSA08J-391YN	RESISTOR	390Ω, 1/10W
R204	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
R205	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
R206	QVZ3523-151A	V RESISTOR, Y GAIN	150Ω
or	QVZ3518-151	V RESISTOR, Y GAIN	150Ω
or	QVZ3518-151A	V RESISTOR, Y GAIN	150Ω
or	QVZ3523-151	V RESISTOR, Y GAIN	150Ω
R207	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
R208	QRSA08J-471YN	RESISTOR	470Ω, 1/10W
R209	QRSA08J-681YN	RESISTOR	680Ω, 1/10W
R210	QRSA08J-242YN	RESISTOR	2.4KΩ, 1/10W
R211	QRSA08J-391YN	RESISTOR	390Ω, 1/10W
R212	QRSA08J-272YN	RESISTOR	2.7KΩ, 1/10W
R213	ERT-D2FGL102S	THERMISTOR	
R214	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
R215	QVZ3523-223A	V RESISTOR, Y COMB-1	22KΩ
or	QVZ3518-223	V RESISTOR, Y COMB-1	22KΩ
or	QVZ3518-223A	V RESISTOR, Y COMB-1	22KΩ
or	QVZ3523-223	V RESISTOR, Y COMB-1	22KΩ

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R216	QRSA08J-272YN	RESISTOR	2.7KΩ, 1/10W
	R217	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R218	ERT-D2FHL332S	THERMISTOR	
	R219	QVZ3523-472A	V RESISTOR, Y COMB-2	4.7KΩ
	or	QVZ3518-472	V RESISTOR, Y COMB-2	4.7KΩ
	or	QVZ3518-472A	V RESISTOR, Y COMB-2	4.7KΩ
	or	QVZ3523-472	V RESISTOR, Y COMB-2	4.7KΩ
	R220	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R221	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R222	QRSA08J-122YN	RESISTOR	1.2KΩ, 1/10W
	R223	QRSA08J-821YN	RESISTOR	820Ω, 1/10W
	R224	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R225	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R226	QRSA08J-181YN	RESISTOR	180Ω, 1/10W
	R227	QRSA08J-821YN	RESISTOR	820Ω, 1/10W
	R228	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R229	QRD161J-821	RESISTOR	820Ω, 1/6W
	R230	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R231	QVZ3523-471A	V RESISTOR, Y COMB-3	470Ω
	or	QVZ3518-471	V RESISTOR, Y COMB-3	470Ω
	or	QVZ3518-471A	V RESISTOR, Y COMB-3	470Ω
	or	QVZ3523-471	V RESISTOR, Y COMB-3	470Ω
	R232	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R233	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R234	QVZ3523-473A	V RESISTOR, 2H-DL COL LEBEL	47KΩ
	or	QVZ3518-473	V RESISTOR, 2H-DL COL LEVEL	47KΩ
	or	QVZ3518-473A	V RESISTOR, 2H-DL COL LEVEL	47KΩ
	or	QVZ3523-473	V RESISTOR, 2H-DL COL LEVEL	47KΩ
	R235	QRSA08J-561YN	RESISTOR	560Ω, 1/10W
	R236	QRSA08J-391YN	RESISTOR	390Ω, 1/10W
	R237	QRSA08J-391YN	RESISTOR	390Ω, 1/10W
	R239	QRSA08J-223YN	RESISTOR	22KΩ, 1/10W
	R243	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R244	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R245	QRSA08J-563YN	RESISTOR	56KΩ, 1/10W
	R246	QRSA08J-393YN	RESISTOR	39KΩ, 1/10W
	C201	QCSA1HJ-470	CAPACITOR	47PF, 50V
	C202	QETC0JM-227	E CAPACITOR	220μF, 6.3V
	C203	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C204	QETC1CM-476	E CAPACITOR	47μF, 16V
	C205	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C206	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C207	QCSA1HJ-101	CAPACITOR	100PF 50V
	C208	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C209	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C210	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C211	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C212	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C213	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C214	QETC0JM-227	E CAPACITOR	220μF, 6.3V
	C215	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C216	QCTA1CH-470	CAPACITOR	47PF, 16V
	C217	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C218	QETC1HM-105	E CAPACITOR	1μF, 50V
	C219	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C223	QCSA1HJ-101	CAPACITOR	100PF 50V
	C224	QCFA1HZ-103	CAPACITOR	0.01μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C225	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C226	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C227	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C228	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C229	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	L201	PU48530-101K	COIL	100μH
	L202	PU48530-101K	COIL	100μH
	L203	PELN0522	COIL, 2H-DL COL LEVEL	
	L204	PU60165-8R2G	COIL	
	EQ201	PU60809	EQUALIZER	8.2μH
	EQ202	PU60810	EQUALIZER	
	BPF201	PU60921	BAND PASS FILTER	
	BPF202	PU60808-2	BAND PASS FILTER	
	DL201	PELN0565	DELAY LINE	
	TP	PU57545	TEST PIN	

—TERMINAL SECTION—

R601	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
R602	QRSA08J-221YN	RESISTOR	220Ω, 1/10W
C603	QCYA1HK-222	CAPACITOR, E EG	0.0022μF, 50V
C604	QCYA1HK-222	CAPACITOR, E EG	0.0022μF, 50V
C607	QCBB1HJ-271	CAPACITOR, E EG	270PF, 50V
C608	QCBB1HJ-101	CAPACITOR, E EG	100PF, 50V
C609	QCBB1HJ-102	CAPACITOR, E EG	0.0001μF, 50V
L603	PU59152-3R3J	COIL, E EG	3.3μH
L604	PU59152-3R3J	COIL, E EG	3.3μH
LC601	PU59885-102	NOISE FILTER, E EG	
LC602	PU59885-102	NOISE FILTER, EEG	
S601	PESW0558	SLIDE SWITCH, E EG	
K602	PU60281-5	FERRITE BEADS, E EG	
SCW1	SDSF3010Z	SCREW, X2	
SKT1	PEMC0766	RGB21PIN SOCKET	
JA1, 2	PU61048	S.CONNECTION, X2	
CN601	PU58844-2	CONNECTOR, E EG	
CN602	PU58844-6	CONNECTOR	
CN604	PU58844-2	CONNECTOR	

—SECAM SW SECTION—

C801	QCYA1HK-103	CAPACITOR	0.01μF, 50V
C802	QETC1CM-476	E CAPACITOR	47μF, 16V
L802	PU48530-101K	COIL	

—ON-SCREEN SECTION—

IC901	M50554-263SP	IC
IC902	M52684AP	IC

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	Q901	DTA114EU	TRANSISTOR	
	Q902	DTA114EU	TRANSISTOR	
	D901	DA204U	DIODE	
	R901	QRSA08J-472YN	RESISTOR	4.7KΩ, 1/10W
	R902	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R903	QRSA08J-681YN	RESISTOR	680Ω, 1/10W
	R904	QRS188J-103YN	RESISTOR	10KΩ, 1/8W
	R905	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R906	QRSA08J-471YN	RESISTOR	470Ω, 1/10W
	R907	QRSA08J-472YN	RESISTOR	4.7KΩ, 1/10W
	R908	QRSA08J-362YN	RESISTOR	3.6KΩ, 1/10W
	R909	QRSA08J-512YN	RESISTOR, EK	5.1KΩ, 1/10W
		QRSA08J-752YN	RESISTOR, E EG	7.5KΩ, 1/10W
	R910	QRSA08J-202YN	RESISTOR	2KΩ, 1/10W
	R911	QRSA08J-622YN	RESISTOR	6.2KΩ, 1/10W
	R912	QRD161J-123	RESISTOR	12KΩ, 1/6W
	R913	QRSA08J-123YN	RESISTOR	12KΩ, 1/10W
	R914	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R915	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R916	QRSA08J-105YN	RESISTOR	1.0MΩ, 1/10W
	R917	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R918	QRSA08J-471YN	RESISTOR	470Ω, 1/10W
	R920	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R921	QRSA08J-271YN	RESISTOR	270Ω, 1/10W
	R922	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R923	QRSA08J-473YN	RESISTOR	47KΩ, 1/10W
	R924	QRD161J-393	RESISTOR	39KΩ, 1/6W
	C903	QETC0JM-227	E CAPACITOR	220μF, 6.3V
	C904	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C905	QAT3123-450	TRIMMER CAPACITOR, DOT CLOCK	
	C906	QCSA1HJ-220	CAPACITOR	22PF 50V
	C907	QCSA1HJ-330	CAPACITOR	33PF 50V
	C908	QCSB1HJ-360	CAPACITOR	36PF 50V
	C909	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C910	QCSA1HJ-270	CAPACITOR	27PF, 50V
	C911	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C912	QCSA1HJ-270	CAPACITOR	27PF, 50V
	C915	QCTA1CH-150	CAPACITOR	15PF, 16V
	C916	QAT3123-200	TRIMMER CAPACITOR, BURST CLOCK	
	C917	QCTA1CH-5R0	CAPACITOR	5PF, 16V
	C918	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C919	QETC0JM-227	E CAPACITOR	220μF, 6.3V
	C921	QCSA1HJ-331	CAPACITOR	330PF, 50V
	C922	QCYA1HK-222	CAPACITOR	0.0022μF, 50V
	C923	QETC1HM-105	E CAPACITOR	1μF, 50V
	C924	QCYA1HK-103	CAPACITOR	0.01μF, 50V
	C925	QCSA1HJ-220	CAPACITOR	22PF, 50V
	C928	QCYA1HK-152	CAPACITOR	0.0015μF, 50V
	C932	QETC1HM-335	E CAPACITOR	3.3μF, 50V
	L901	PU48530-101K	COIL	100μH
	L902	PU59988-220JY	COIL	22μH
	L903	PU59988-8R2JY	COIL	8.2μH
	L904	PU59988-150J	COIL	15μH
	L905	PU59988-220JY	COIL	22μH

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	L906	PU59988-220JY	COIL	22μH
	L907	PU48530-101K	COIL	100μH
⚠	CF901	PU60086	RESONATOR	
⚠	X901	PU60908	CRYSTAL RESONATOR	
	CN901	PU60417-6	CONNECTOR	
	TP	PU57545	TEST PIN	

—OTHER SECTION—

R301		QVZ3523-332AZ	V RESISTOR, EE BALANCE	3.3KΩ
	or	QVZ3518-332	V RESISTOR, EE BALANCE	3.3KΩ
	or	QVZ3518-332AZ	V RESISTOR, EE BALANCE	3.3KΩ
	or	QVZ3523-332	V RESISTOR, EE BALANCE	3.3KΩ
R302		QVZ3523-473A	V RESISTOR, EE LEVEL	47KΩ
	or	QVZ3518-473	V RESISTOR, EE LEVEL	47KΩ
	or	QVZ3518-473A	V RESISTOR, EE LEVEL	47KΩ
	or	QVZ3523-473	V RESISTOR, EE LEVEL	47KΩ
R303		QVZ3523-471A	V RESISTOR, PB LEVEL	470Ω
	or	QVZ3518-471	V RESISTOR, PB LEVEL	470Ω
	or	QVZ3518-471A	V RESISTOR, PB LEVEL	470Ω
	or	QVZ3523-471	V RESISTOR, PB LEVEL	470Ω
R304		QVZ3523-683AZ	V RESISTOR, BIAS	68KΩ
	or	QVZ3523-683	V RESISTOR, BIAS	68KΩ
	or	QVZ3518-683	V RESISTOR, BIAS	68KΩ
	or	QVZ3518-683AZ	V RESISTOR, BIAS	68KΩ
R305		QRSA08J-100YN	RESISTOR	10Ω, 1/10W
R427		QVZ3523-684AZ	V RESISTOR, SP PB SW POINT	680KΩ
	or	QVZ3518-684	V RESISTOR, SP PB SW POINT	680KΩ
	or	QVZ3518-684AZ	V RESISTOR, SP PB SW POINT	680KΩ
	or	QVZ3523-684	V RESISTOR, SP PB SW POINT	680KΩ
HD1		PU60521	PWB HOLDER(A), X2	
HD2		PU60522	PWB HOLDER(B), X2	
SLD1		PQ42995-1-1	SHIELD CASE	
SPC1		PU60010-2	SPACER, X2	
TP		PU57545	TEST PIN	

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A/CTL HEAD BOARD ASSEMBLY 〈12〉

PWB1	PB40046-01-02	A/CTL HEAD BOARD ASSEMBLY
CN1	PU58844-104	CAP HOUSING
CN2	PU58844-103	CAP HOUSING

⚠ REF.No	PART No.	PART NAME,DESCRIPTION	

DEMODULATOR BOARD ASSEMBLY(E,EG)〈14〉

PWBA	PB10392F3	DEMODULATOR BOARD ASSEMBLY	
IC201	TDA3800GS	IC	
Q201	DTC114EU	TRANSISTOR	
Q202	2SD1292(QR)	TRANSISTOR	
Q203	DTC114EU	TRANSISTOR	
Q204	DTC114EU	TRANSISTOR	
Q205	DTC114EU	TRANSISTOR	
Q206	DTC114EU	TRANSISTOR	
Q207	DTC114EU	TRANSISTOR	
Q208	DTC114EU	TRANSISTOR	
Q209	2SD1450S,T	TRANSISTOR	
or	2SD1292(QR)	TRANSISTOR	
Q210	2SD1450S,T	TRANSISTOR	
or	2SD1292(QR)	TRANSISTOR	
Q211	DTA144EU	TRANSISTOR	
D201	1SS133	DIODE	
D202	1SS133	DIODE	
D203	1SS133	DIODE	
D204	1SS133	DIODE	
D206	1SS133	DIODE	
R201	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R202	QVZ3518-103	V RESISTOR, SEPARATION ADJ	
R203	QRSA08J-153YN	RESISTOR	15KΩ, 1/10W
R204	QRSA08J-331YN	RESISTOR	330Ω, 1/10W
R205	QRSA08J-821YN	RESISTOR	820Ω, 1/10W
R206	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
R207	QRSA08J-104YN	RESISTOR	100KΩ, 1/10W
R208	QRSA08J-154YN	RESISTOR	150KΩ, 1/10W
R209	QRSA08J-271YN	RESISTOR	270Ω, 1/10W
R210	QRSA08J-273YN	RESISTOR	27KΩ, 1/10W
R211	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R212	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R213	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R214	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R215	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R216	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R217	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R221	QVZ3518-332	V RESISTOR, AUDIO L LEVEL	3.3KΩ
R222	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
R223	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R224	QVZ3518-332	V RESISTOR, AUDIO R LEVEL	
R225	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
R226	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
R240	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
R241	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
R242	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
C201	QEKF1CM-106	E CAPACITOR	10μF, 16V

⚠ REF.No	PART No.	PART NAME,DESCRIPTION	
C202	QFN31HK-392	M CAPACITOR	0.039μF, 50V
C203	QFN31HK-392	M CAPACITOR	0.039μF, 50V
C204	QFN31HK-392	M CAPACITOR	0.039μF, 50V
C205	QEKF1CM-106	E CAPACITOR	10μF, 16V
C206	QEKF1CM-106	E CAPACITOR	10μF, 16V
C207	QEKF1CM-476	E CAPACITOR	47μF, 16V
C208	QCYA1HK-223	CAPACITOR	0.022μF, 50V
C209	QCYA1HK-473	CAPACITOR	0.047μF, 50V
C210	QFP31HJ-102	M CAPACITOR	0.0001μF, 50V
C211	QEKF1CM-107	E CAPACITOR	100μF, 16V
C212	QCYA1HK-473	CAPACITOR	0.047μF, 50V
C213	QEKF1CM-106	E CAPACITOR	10μF, 16V
C214	QEKF1CM-106	E CAPACITOR	10μF, 16V
C215	QEKF1CM-336	E CAPACITOR	33μF, 16V
C216	QETA1CM-227	E CAPACITOR	220μF, 16V
C217	QEKF1HM-105	E CAPACITOR	1μF, 50V
C218	QEKF1CM-476	E CAPACITOR	47μF, 16V
BPF201	PU58226	BAND PASS FILTER	
CF201	PU52775	CERAMIC FILTER	
CF202	PU52775-2	CERAMIC FILTER	
T201	PU59489	COIL, SECOND AUDIO ADJ	
T202	PU59490	COIL	
CN201	PU58844-105	CONNECTOR	
CN202	PU60417-105	CONNECTOR	
CN203	PU58844-102	CONNECTOR	

DEMODULATOR BOARD ASSEMBLY(EK)〈14〉

PWBA	PB20476D	DEMOD BOARD ASSEMBLY
IC1	M51365SP	IC
IC2	TA8662N	IC
IC3	M65109BSP	IC
or	VC2507	IC
IC4	SM5807FP	IC
IC5	UPD6372CX	IC
IC6	UPC4559C	IC
IC7	M5201L	IC
IC8	M5201L	IC
IC9	UPC4559C	IC
Q1	2SC3354	TRANSISTOR
Q3	2SA933S(RS)	TRANSISTOR
Q4	2SC3313BCTA	TRANSISTOR
Q5	2SD1292(QR)	TRANSISTOR
Q7	2SD1450S,T	TRANSISTOR
Q8	2SD1450S,T	TRANSISTOR
Q9	2SD1450S,T	TRANSISTOR
Q10	DTC114ES	TRANSISTOR
Q11	2SA933S(RS)	TRANSISTOR
Q12	2SA933S(RS)	TRANSISTOR
Q13	DTC114ES	TRANSISTOR
Q14	DTC114ES	TRANSISTOR

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
⚠	Q15	DTC114ES	TRANSISTOR	
⚠	Q16	DTC114ES	TRANSISTOR	
	D1	11ES2	DIODE	
	D2	RD10ES-T1B3	ZENER DIODE	
	D3	RD3.0ES-T1B2	ZENER DIODE	
		or MTZ3.0BT-77	ZENER DIODE	
	D4	1SS133	DIODE	
	D5	1SS133	DIODE	
	D6	1SS133	DIODE	
	D7	KV1310A-1	VARI CAP DIODE	
	D8	1SS133	DIODE	
	R1	QRD161J-101	RESISTOR	100Ω, 1/6W
	R2	QRD161J-682	RESISTOR	6.8KΩ, 1/6W
	R3	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R4	QRD161J-470	RESISTOR	47Ω, 1/6W
	R5	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R6	QRD161J-680	RESISTOR	68Ω, 1/6W
	R7	QRD161J-330	RESISTOR	33Ω, 1/6W
	R8	QRD161J-331	RESISTOR	330Ω, 1/6W
	R9	QRD161J-824	RESISTOR	820KΩ, 1/6W
	R10	QRD161J-470	RESISTOR	47Ω, 1/6W
	R11	QRD161J-561	RESISTOR	560Ω, 1/6W
	R12	QRD161J-471	RESISTOR	470Ω, 1/6W
	R13	QRD161J-681	RESISTOR	680Ω, 1/6W
	R14	QRD161J-681	RESISTOR	680Ω, 1/6W
	R15	QRD161J-391	RESISTOR	390Ω, 1/6W
	R16	QRD161J-332	RESISTOR	3.3KΩ, 1/6W
	R17	QRD161J-912	RESISTOR	9.1KΩ, 1/6W
	R22	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R23	QRD161J-561	RESISTOR	560Ω, 1/6W
	R24	QRD161J-153	RESISTOR	15KΩ, 1/6W
	R25	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R26	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R27	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R28	QRD161J-122	RESISTOR	1.2KΩ, 1/6W
	R29	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R30	QRD161J-121	RESISTOR	120Ω, 1/6W
	R31	QRD161J-154	RESISTOR	150KΩ, 1/6W
	R32	QRD161J-224	RESISTOR	220KΩ, 1/6W
	R33	QRD161J-471	RESISTOR	470Ω, 1/6W
	R34	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R35	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R36	QRD161J-511	RESISTOR	510Ω, 1/6W
	R37	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R38	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R39	QRD161J-271	RESISTOR	270Ω, 1/6W
	R40	QRD161J-101	RESISTOR	100Ω, 1/6W
	R41	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R42	QRD161J-272	RESISTOR	2.7KΩ, 1/6W
	R43	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R44	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R45	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R46	QRD161J-681	RESISTOR	680Ω, 1/6W
	R47	QRD161J-471	RESISTOR	470Ω, 1/6W
	R48	QRD161J-471	RESISTOR	470Ω, 1/6W
	R49	QRD161J-471	RESISTOR	470Ω, 1/6W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R51	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R52	QRD161J-223	RESISTOR	22KΩ, 1/6W
	R53	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R54	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R55	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R56	QRD161J-152	RESISTOR	1.5KΩ, 1/6W
	R57	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R58	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R59	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R60	QRD161J-392	RESISTOR	3.9KΩ, 1/6W
	R61	QRD161J-512	RESISTOR	5.1KΩ, 1/6W
	R62	QRD161J-512	RESISTOR	5.1KΩ, 1/6W
	R63	QRD161J-561	RESISTOR	560Ω, 1/6W
	R64	QRD161J-561	RESISTOR	560Ω, 1/6W
	R65	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R66	QRD161J-273	RESISTOR	27KΩ, 1/6W
	R67	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R68	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R69	QRD161J-432	RESISTOR	4.3KΩ, 1/6W
	R70	QRD161J-432	RESISTOR	4.3KΩ, 1/6W
	R71	QRD161J-471	RESISTOR	470Ω, 1/6W
	R72	QRD161J-471	RESISTOR	470Ω, 1/6W
	R73	QRD161J-473	RESISTOR	47KΩ, 1/6W
	R74	QRD161J-473	RESISTOR	47KΩ, 1/6W
	R75	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R76	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R80	QRD161J-123	RESISTOR	12KΩ, 1/6W
	R81	QRD161J-332	RESISTOR	3.3KΩ, 1/6W
	R82	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R83	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R84	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R85	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R86	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R87	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R88	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R89	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R90	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R91	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R95	QRD161J-103	RESISTOR	10KΩ, 1/6W
	C1	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
	C2	QCXB1CK-222	CAPACITOR	0.0022μF, 16V
	C3	QCXB1CK-222	CAPACITOR	0.0022μF, 16V
	C4	QCBB1HJ-102	CAPACITOR	0.001μF, 50V
	C5	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C6	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C7	QETC1HM-105	E CAPACITOR	1μF, 50V
	C8	QCT25RH-220	CAPACITOR	22P, 50V
	C9	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C10	QCXB1CK-222	CAPACITOR	0.0022μF, 16V
	C11	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C12	QCF11HP-473	CAPACITOR	0.047μF, 50V
	C13	QCSB1HJ-100	CAPACITOR	10PF, 50V
	C14	QFV71HJ-273	TF CAPACITOR	0.027μF, 50V
	C15	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C16	QCBB1HJ-331	CAPACITOR	330PF, 50V
	C17	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C18	QETC1HM-106	E CAPACITOR	10μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C21	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C23	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C24	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C25	QETC1CM-226	E CAPACITOR	22μF, 16V
	C26	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C27	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C28	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C29	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C30	QCSB1HJ-560	CAPACITOR	56PF 50V
	C31	QCSB1HJ-390	CAPACITOR	39PF 50V
	C32	QCSB1HJ-180	CAPACITOR	18PF 50V
	C33	QAT3123-300	TRIMMER CAPACITOR, CARIER VCXO	
	C34	QETC1HM-474	E CAPACITOR	0.47μF, 50V
	C35	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C36	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C37	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C38	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C39	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C40	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C41	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C43	QCBB1HJ-101	CAPACITOR	100PF 50V
	C44	QCBB1HJ-101	CAPACITOR	100PF 50V
	C45	QCSB1HJ-560	CAPACITOR	56PF 50V
	C46	QCSB1HJ-390	CAPACITOR	39PF 50V
	C47	QCSB1HJ-510	CAPACITOR	51PF 50V
	C49	QETC1HM-105	E CAPACITOR	1μF, 50V
	C50	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C51	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C52	QETC1CM-106	E CAPACITOR	10μF, 16V
	C54	QCBB1HJ-101	CAPACITOR	100PF 50V
	C55	QCBB1HJ-101	CAPACITOR	100PF 50V
	C56	QETC1CM-106	E CAPACITOR	10μF, 16V
	C57	QCBB1HJ-121	CAPACITOR	120PF 50V
	C58	QCBB1HJ-121	CAPACITOR	120PF 50V
	C61	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C62	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C63	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C64	QETC1CM-106	E CAPACITOR	10μF, 16V
	C65	QETC1HM-105	E CAPACITOR	1μF, 50V
	C66	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C67	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C68	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C69	QETC1CM-106	E CAPACITOR	10μF, 16V
	C70	QCVB1CM-103	CAPACITOR	0.01μF, 16V
	C72	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C73	QETC1CM-476	E CAPACITOR	47μF, 16V
	C75	QETC1CM-476	E CAPACITOR	47μF, 16V
	C76	QETC1CM-476	E CAPACITOR	47μF, 16V
	C77	QFV71HJ-104	TF CAPACITOR	0.1μF, 50V
	C78	QETC1CM-476	E CAPACITOR	47μF, 16V
	C79	QETC1CM-476	E CAPACITOR	47μF, 16V
	C80	QETC1CM-476	E CAPACITOR	47μF, 16V
	C81	QETC1HM-106	E CAPACITOR	10μF, 50V
	C82	QETC1HM-106	E CAPACITOR	10μF, 50V
	C83	QFN31HJ-332	M CAPACITOR	0.0033μF, 50V
	C84	QFN31HJ-332	M CAPACITOR	0.0033μF, 50V
	C85	QFN31HJ-472	M CAPACITOR	0.0047μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C86	QFN31HJ-472	M CAPACITOR	0.0047μF, 50V
	C87	QFN31HJ-683	M CAPACITOR	0.068μF, 50V
	C88	QFN31HJ-683	M CAPACITOR	0.068μF, 50V
	C89	QETC1HM-335	E CAPACITOR	3.3μF, 50V
	C90	QETC1HM-335	E CAPACITOR	3.3μF, 50V
	C91	QETC1HM-335	E CAPACITOR	3.3μF, 50V
	C93	QCXB1CK-472	CAPACITOR	0.0047μF, 16V
	C94	QEK61CM-226	E CAPACITOR	22μF, 16V
	C98	QETC1CM-226	E CAPACITOR	22μF, 16V
	C99	QETC1HM-106	E CAPACITOR	10μF, 50V
	C100	QETC1HM-106	E CAPACITOR	10μF, 50V
	L1	PU59152-2R2J	COIL	2.2μH
	L2	PU54223-100J	COIL	10μH
	L3	PU59152-100J	COIL	10μH
	L4	PU54223-100J	COIL	10μH
	L5	PU54223-100J	COIL	10μH
	L6	PU59152-100J	COIL	10μH
	L7	PU54223-821J	COIL	820μH
	L8	PU54223-821J	COIL	820μH
	L9	PU54223-100J	COIL	10μH
	L10	PU54223-100J	COIL	10μH
	BPF1	PU60332	BAND PASS FILTER	
	CF1	PU60774-3	CERAMIC FILTER	
	CF2	PU59242-3	CERAMIC FILTER	
	SAW1	PU60336	SAW FILTER	
⚠	X1	PU60334	CRYSTAL RESONATOR	
⚠	X2	PU60335-2	CRYSTAL RESONATOR	
	T1	PU59308	COIL, VCO	
	T2	PU61106	COIL, CLOCK VCO	
	CN1	PU58844-2	CONNECTOR	
	CN2	PU58844-3	CONNECTOR	
	CN3	PU60417-4	CONNECTOR	
	CN4	PU60417-3	CONNECTOR	
	CN6	PU58844-2	CONNECTOR	
⚠	CP1	ICP-F10	CIRCUIT PROTECTOR	
⚠	CP2	ICP-F10	CIRCUIT PROTECTOR	

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TIMER BOARD ASSEMBLY 〈20〉

PWBA		PB20560B	TIMER BOARD ASSEMBLY, EG
		PB20560C	TIMER BOARD ASSEMBLY, EK
		PB20560D	TIMER PWB ASSEMBLY, E
IC1		UPD75217CW-075	IC
IC2		IC-PST523H-2	IC
IC3		SDA5642	IC, EG
Q1		2SC3199(G)	TRANSISTOR
	or	2SC3311A(RS)	TRANSISTOR
	or	2SC536SPA(FG)	TRANSISTOR
	or	2SC1740S(RS)	TRANSISTOR

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	Q2	DTC144ES	TRANSISTOR	
	D1	RD9.1ES-T1B2	ZENER DIODE	
	D2	1SS133	DIODE	
	D3	1SS133	DIODE	
	D4	11ES2	DIODE	
	D5	11ES2	DIODE	
	D6	1SS133	DIODE	
	D36	1SS133	DIODE,EK	
	R1	QRD161J-103	RESISTOR	10KΩ,1/6W
	R4	QRD161J-682	RESISTOR	6.8KΩ,1/6W
	R5	QRD161J-333	RESISTOR	33KΩ,1/6W
	R6	QRD161J-333	RESISTOR	33KΩ,1/6W
	R7	QRD161J-102	RESISTOR	1KΩ,1/6W
	R8	QRD161J-103	RESISTOR	10KΩ,1/6W
	R9	QRD161J-103	RESISTOR	10KΩ,1/6W
	R10	QRD161J-103	RESISTOR	10KΩ,1/6W
	R11	QRD161J-103	RESISTOR	10KΩ,1/6W
	R12	QRD161J-333	RESISTOR	33KΩ,1/6W
	R13	QRD161J-271	RESISTOR	270Ω,1/6W
	R14	QRD161J-271	RESISTOR	270Ω,1/6W
	R15	QRD161J-103	RESISTOR	10KΩ,1/6W
	R16	QRD161J-103	RESISTOR	10KΩ,1/6W
	R17	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R21	QRD161J-824	RESISTOR,EG	820KΩ,1/6W
	R22	QRD161J-101	RESISTOR,EG	100Ω,1/6W
	R23	QRD161J-562	RESISTOR,EG	5.6KΩ,1/6W
	R24	QRD161J-104	RESISTOR,EG	100KΩ,1/6W
	R25	QRD161J-103	RESISTOR	10KΩ,1/6W
	R26	QRD161J-103	RESISTOR	10KΩ,1/6W
	R27	QRD161J-105	RESISTOR,EG	1MΩ,1/6W
	R28	QRD161J-824	RESISTOR,EG	820KΩ,1/6W
	R29	QRD161J-202	RESISTOR,EG	2.2KΩ,1/6W
	R30	QRD161J-224	RESISTOR	220KΩ,1/6W
	R31	QRD161J-151	RESISTOR,E EG	150Ω,1/6W
	R32	QRD161J-271	RESISTOR	270Ω,1/6W
	R33	QRD161J-271	RESISTOR	270Ω,1/6W
	R34	QRD161J-271	RESISTOR,EG	270Ω,1/6W
	R35	QRD161J-271	RESISTOR,EG	270Ω,1/6W
	R40	QRD161J-271	RESISTOR	270Ω,1/6W
	R41	QRD161J-103	RESISTOR	10KΩ,1/6W
	R42	QRD161J-561	RESISTOR	560Ω,1/6W
	R43	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R44	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R45	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R56	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R57	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R58	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	R60	QRD161J-103	RESISTOR	10KΩ,1/6W
	R61	QRD161J-103	RESISTOR	10KΩ,1/6W
	R62	QRD161J-472	RESISTOR	4.7KΩ,1/6W
	RA1	QRB047J-333	RESISTOR ARRAY	
	or	QRB049J-333	RARRAY	
	RA2	QRB047J-104	NETWORK RESISTOR	
	or	QRB049J-104	NETWORK RESISTOR	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	RA3	QRB077J-104	RESISTOR ARRAY	
	or	QRB079J-104	NETWORK RESISTOR	
	C2	QER61HM-104	E CAPACITOR,EG	0.1μF,50V
	C3	QCVB1CN-103	CAPACITOR	0.01μF,16V
	C4	QER61CM-106	E CAPACITOR	10μF,16V
	C5	PU60676-104	E CAPACITOR,EK	0.1μF
		QEA40HZ-105	E CAPACITOR (DOUBLE),E EG	1μF
	C6	QAT3123-200	TRIMMER CAPACITOR,CLOCK	20PF
	C7	QCSB1HJ-120	CAPACITOR	12PF,50V
	C8	QFN31HJ-104	M CAPACITOR,EG	0.1μF,50V
	C9	QFN31HJ-333	M CAPACITOR,EG	0.033μF,50V
	C10	QCVB1CN-103	CAPACITOR,EG	0.01μF,16V
	C11	QER61CM-106	E CAPACITOR	10μF,16V
	C12	QCBB1HJ-151	CAPACITOR,EG	150PF 50V
	C13	QCVB1CN-103	CAPACITOR	0.01μF,16V
	C15	QCBB1HJ-101	CAPACITOR	100PF,50V
	C16	QCBB1HJ-101	CAPACITOR	100PF,50V
	C17	QCF11HP-473	CAPACITOR	0.047μF,50V
	C18	QER61CM-106	E CAPACITOR	10μF,16V
	C19	QER61CM-106	E CAPACITOR	10μF,16V
	C21	QCVB1CN-103	CAPACITOR	0.01μF,16V
	C22	QCBB1HJ-151	CAPACITOR	150PF,50V
	C23	QCBB1HJ-151	CAPACITOR,EK	150PF,50V
		QCBC1HJ-151	CAPACITOR,E EG	150PF,50V
⚠	X1	PU60226-4	CRYSTAL RESONATOR	
	K1	PU60281-5	FERRITE BEADS	
	K2	PU60281-5	FERRITE BEADS	
	CN1	PU60417-107	CONNECTOR	
	CN2	PU60417-106	CONNECTOR	
	CN3	PU60417-106	CONNECTOR	
	CN4	PU60417-103	CONNECTOR	
	CN5	PU60417-114	CONNECTOR	
	CN6	PU58844-103	CONNECTOR,E EK	
		PU58844-105	CONNECTOR,EG	
⚠	CP1	ICP-F10	CIRCUIT PROTECTOR	

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JACK BOARD ASSEMBLY 〈24〉

PWBA	PB20547B	JACK BOARD ASSEMBLY,E EG	
	PB20547C	JACK BOARD ASSEMBLY,EK	
D229	1SS133	DIODE	
D401	SLR-34VC3F	LE DIODE POWER	
R1	QRD161J-221	RESISTOR	220Ω,1/6W
R217	QRD161J-273	RESISTOR,E EG	27KΩ,1/6W
R218	QRD161J-273	RESISTOR,E EG	27KΩ,1/6W
R219	QRD161J-473	RESISTOR,E EG	47KΩ,1/6W
R401	PERE0474	V RESISTOR,MIC MIX LEVEL	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	R402	PERE0473	V RESISTOR, REC LEVEL
	R403	PERE0472	V RESISTOR, REC BALANCE
	S1	PU60392-2-2	TACT SWITCH, POWER
	or	PU60975-2Z	TACT SWITCH, POWER
	or	PESW0525-02Z	TACT SWITCH, POWER
	S13	PU60392-1-2Z	TACT SWITCH, MIX
	or	PU60975-Z	TACT SWITCH, MIX
	or	PESW0525-Z	TACT SWITCH, MIX
	S14	PU60392-1-2Z	TACT SWITCH, A MON
	or	PU60975-Z	TACT SWITCH, A MON
	or	PESW0525-Z	TACT SWITCH, A MON
	S18	PU60392-1-2Z	TACT SWITCH, C ADJ/PROG
	or	PESW0525-Z	TACT SWITCH, C ADJ/PROG
	or	PU60975-Z	TACT SWITCH, C ADJ/PROG
	S20	PU60392-1-2Z	TACT SWITCH, SIMUL
	or	PU60975-Z	TACT SWITCH, SIMUL
	or	PESW0525-Z	TACT SWITCH, SIMUL
	S21	PU60392-1-2Z	TACT SWITCH, CANCEL/SKIP/PESET
	or	PU60975-Z	TACT SWITCH, CANCEL/SKIP/PESET
	or	PESW0525-Z	TACT SWITCH, CANCEL/SKIP/PESET
	S22	PU60392-1-2Z	TACT SWITCH, REP/DAY/ST/MEM
	or	PU60975-Z	TACT SWITCH, PEP/DAY/ST/MEM
	or	PESW0525-Z	TACT SWITCH, PEP/DAY/ST/MEM
	S23	PU60392-1-2Z	TACT SWITCH, SELECT
	or	PU60975-Z	TACT SWITCH, SELECT
	or	PESW0525-Z	TACT SWITCH, SELECT
	S25	PU60392-1-2Z	TACT SWITCH, SET+/CH+/TRACK+
	or	PU60975-Z	TACT SWITCH, SET+/CH+/TRACK+
	or	PESW0525-Z	TACT SWITCH, SET+/CH+/TRACK+
	S26	PU60392-1-2Z	TACT SWITCH, SET-/CH-/TRACK-
	or	PU60975-Z	TACT SWITCH, SET-/CH-/TRACK-
	or	PESW0525-Z	TACT SWITCH, SET-/CH-/TRACK-
	S27	PU60392-1-2Z	TACT SWITCH, SP/LP
	or	PU60975-Z	TACT SWITCH, SP/LP
	or	PESW0525-Z	TACT SWITCH, SP/LP
	S29	PU60392-1-2Z	TACT SWITCH, CH SEARCH
	or	PU60975-Z	TACT SWITCH, CH SEARCH
	or	PESW0525-Z	TACT SWITCH, CH SEARCH
	S30	PU60392-1-2Z	TACT SWITCH, CH SET/VPS
	or	PU60975-Z	TACT SWITCH, CH SET/VPS
	or	PESW0525-Z	TACT SWITCH, CH SET/VPS
	S37	PU60392-2-2	TACT SWITCH, EJECT
	or	PU60975-2Z	TACT SWITCH, EJECT
	or	PESW0525-02Z	TACT SWITCH, EJECT
	S401	PESW0551	SLIDE SWITCH, ALC
	or	PESW0575	SLIDE SWITCH, ALC
	S402	PESW0551	SLIDE SWITCH, TV SOUND, E EG
	or	PESW0575	SLIDE SWITCH, TV SOUND, E EG
		PESW0551	SLIDE SWITCH, NICAM EK
	or	PESW0575	SLIDE SWITCH, NICAM EK
	S403	PESW0551	SLIDE SWITCH, FORCED, E EG
	or	PESW0575	SLIDE SWITCH, FORCED, E EG
	S404	PESW0551	SLIDE SWITCH, W ASPEC
	or	PESW0575	SLIDE SWITCH, W ASPEC
	S405	PESW0550	SLIDE SWITCH, REPEAT
	or	PESW0574	SLIDE SWITCH, REPEAT
	S406	PESW0551	SLIDE SWITCH, AVI OUTPUT
	or	PESW0575	SLIDE SWITCH, AVI OUTPUT

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	CL1	PU56729-2	WIRE CLAMP
	HD1	PQM30038-4	LED HOLDER
	HD2	PQM30039	LED SHADE
	J401	PU60664-3	MINI JACK, MIC
	CN1	PU58844-5	CONNECTOR
	CN2	PU60417-7	CONNECTOR
	CN3	PU60417-3	CONNECTOR
	CN4	PU60417-4	CONNECTOR, EK
		PU60417-6	CONNECTOR, E EG
	CN5	PEMC0723-011	CONNECTOR(BOARD TO BOARD)
	CN6	PU60417-3	CONNECTOR

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SWITCH DISPLAY BOARD ASSEMBLY 〈28〉

	PW8A	PB10576B-01	SW/DISP BOARD ASSEMBLY, E EG
		PB10576C	SW/DISP BOARD ASSEMBLY, EK
	IC101	GP1U541X	IR DETECT UNIT
	IC103	MSC7112-01SS	IC
	Q101	2SK658	FE TRANSISTOR
	Q102	2SB643S	TRANSISTOR
	Q103	DTA114ES	TRANSISTOR
	Q104	DTC114ES	TRANSISTOR
	Q105	DTC143TS	TRANSISTOR
	Q106	DTC143TS	TRANSISTOR
	Q107	DTC143TS	TRANSISTOR
	D102	SLR-34VC3F	LE DIODE, STEREO
	D103	SLR-34MC3F	LE DIODE, BILING, E EG
		SLR-34VC3F	LE DIODE, MONO A, EK
	D104	SLR-34VC3F	LE DIODE, MONO B, EK
	D105	SLR-34MC3F	LE DIODE, S-VHS
	D106	SLR-34MC3F	LE DIODE, S-VHS
	D107	SLR-34MC3F	LE DIODE, AT TRACK
	D108	SLR-34MC3F	LE DIODE, WIDE ASPECT
	D130	RD3.6ES-T1B1	ZENER DIODE
	D131	1SS133	DIODE
	D134	1SS133	DIODE
	or	MA165	DIODE
	D135	1SS133	DIODE
	or	MA165	DIODE
	D136	1SS133	DIODE
	or	MA165	DIODE
	D137	1SS133	DIODE
	or	MA165	DIODE
	HD104	PQ40795-3-2	LED HOLDER
	R101	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R102	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R103	QRD161J-102	RESISTOR 1KΩ, 1/6W
	R104	QRD161J-273	RESISTOR 27KΩ, 1/6W
	R105	QRD161J-102	RESISTOR 1KΩ, 1/6W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R106	QRD161J-472	RESISTOR	4.7KΩ, 1/6W
	R107	QRD161J-822	RESISTOR	8.2KΩ, 1/6W
	R108	QRD161J-331	RESISTOR	330Ω, 1/6W
	R109	QRD161J-331	RESISTOR	330Ω, 1/6W
	R110	QRD161J-331	RESISTOR, EK	330Ω, 1/6W
	R111	QRD161J-221	RESISTOR	220Ω, 1/6W
	R112	QRD161J-221	RESISTOR	220Ω, 1/6W
	R113	QRD161J-221	RESISTOR	220Ω, 1/6W
	R114	PU61016	V RESISTOR, HAED PHONE LEVEL	
	R115	QRD161J-103	RESISTOR	10KΩ, 1/6W
	R116	QRD161J-331	RESISTOR	330Ω, 1/6W
	R126	QRD161J-333	RESISTOR	33KΩ, 1/6W
	R127	QRD161J-103	RESISTOR	10KΩ, 1/6W
	C101	QCBB1HJ-101	CAPACITOR	100PF 50V
	C102	QER61HM-104	E CAPACITOR	0.1μF, 50V
	C103	QER60JM-336	E CAPACITOR	33μF, 6.3V
	C104	QCVB1CN-103	CAPACITOR	0.01μF, 16V
	C105	QER61VM-106	E CAPACITOR	100μF
	C115	QCSB1HJ-330	CAPACITOR	33PF 50V
	C116	QCSB1HJ-330	CAPACITOR	33PF 50V
	C117	QCF11HP-473	CAPACITOR	0.047μF, 50V
	C119	QCFB1EZ-223	CAPACITOR	0.022μF, 25V
	L101	PU59152-2R2J	COIL, E EG	2.2μH
	L103	PU59152-1R0J	COIL, E EG	1.0μH
	L104	PU59152-1R0J	COIL, E EG	1.0μH
	LC101	PU59885-102	N FILTER, EK	
	LC102	PU59885-102	N FILTER, EK	
	LC103	PU59885-223	N FILTER, EK	
	LC104	PU59885-223	N FILTER, EK	
	S2	PU60392-2-2	TACT SWITCH, STOP	
	or	PU60975-2Z	TACT SWITCH, STOP	
	or	PESW0525-02Z	TACT SWITCH, STOP	
	S3	PU60392-2-2	TACT SWITCH, FF	
	or	PU60975-2Z	TACT SWITCH, FF	
	or	PESW0525-02Z	TACT SWITCH, FF	
	S4	PU60392-2-2	TACT SWITCH, REW	
	or	PU60975-2Z	TACT SWITCH, REW	
	or	PESW0525-02Z	TACT SWITCH, REW	
	S5	PU60392-2-2	TACT SWITCH, A DUB	
	or	PU60975-2Z	TACT SWITCH, A DUB	
	or	PESW0525-02Z	TACT SWITCH, A DUB	
	S6	PU60392-2-2	TACT SWITCH, REC	
	or	PU60975-2Z	TACT SWITCH, REC	
	or	PESW0525-02Z	TACT SWITCH, REC	
	S7	PU60392-2-2	TACT SWITCH, PLAY	
	or	PU60975-2Z	TACT SWITCH, PLAY	
	or	PESW0525-02Z	TACT SWITCH, PLAY	
	S8	PU60392-2-2	TACT SWITCH, PAUSE	
	or	PU60975-2Z	TACT SWITCH, PAUSE	
	or	PESW0525-02Z	TACT SWITCH, PAUSE	
	S24	PU60392-2-2	TACT SWITCH, TIMER	
	or	PESW0525-02Z	TACT SWITCH, TIMER	
	or	PU60975-2Z	TACT SWITCH, TIMER	
	S28	PU60392-2-2	TACT SWITCH, DISP OFF	
	or	PU60975-2Z	TACT SWITCH, DISP OFF	
	or	PESW0525-02Z	TACT SWITCH, DISP OFF	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	S32	PU60392-2-2	TACT SWITCH, DISPLAY
	or	PU60975-2Z	TACT SWITCH, DISPLEY
	or	PESW0525-02Z	TACT SWITCH, DISPLEY
	S38	PU60392-2-2	TACT SWITCH, S-VHS
	or	PU60975-2Z	TACT SWITCH, S-VHS
	or	PESW0525-02Z	TACT SWITCH, S-VHS
	S39	PU60392-2-2	TACT SWITCH, S/AV
	or	PU60975-2Z	TACT SWITCH, S/AV
	or	PESW0525-02Z	TACT SWITCH, S/AV
	S49	PU60392-2-2	TACT SWITCH, CH+
	or	PU60975-2Z	TACT SWITCH, CH+
	or	PESW0525-02Z	TACT SWITCH, CH+
	S50	PU60392-2-2	TACT SWITCH, CH-
	or	PU60975-2Z	TACT SWITCH, CH-
	or	PESW0525-02Z	TACT SWITCH, CH-
	JA1	PU60664-3	MINI JACK
	JA2	PU60664	MINI JACK
	TB1	PEMC0851	JACK BOARD
	FDP10	PEDP0040	FLUORESCENT DISPLAY PANEL
	HD102	PQ33881	FDP HOLDER(L)
	HD103	PQ33880	FDP HOLDER(R)
	HD105	PQ43746	LED SHADE
	CN101	PU60417-105	CONNECTOR
	CN102	PU60417-106	CONNECTOR
	CN103	PU60417-114	CONNECTOR
	CN104	PU60417-104	CONNECTOR, EK
		PU60417-106	CONNECTOR, E EG
	CN106	PU58844-5	CONNECTOR
	CN107	PU60417-3	CONNECTOR
	CN108	PU58844-7	CONNECTOR
	CN109	PU58844-4	CONNECTOR
	CN110	PU60417-4	CONNECTOR, EK
		PU60417-5	CONNECTOR, E EG

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TERMINAL2 BOARD ASSEMBLY 〈36〉

PWBA	PB20573A	TERMINAL 2 BOARD ASSEMBLY, E EG	
	PB20573B	TERMINAL 2 BOARD ASSEMBLY, EK	
R801	QRD162J-750	RESISTOR	75Ω, 1/6W
R802	QRD162J-750	RESISTOR	75Ω, 1/6W
LC801	PU59885-102	N FILTER	
LC802	PU59885-102	N FILTER	
JP801	PEMC0766	RGB21PIN SOCKET	
CN801	PU58844-5	CONNECTOR	
CN802	PU58844-3	CONNECTOR	
CN803	PU58844-2	CONNECTOR	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	IC1	TA8733F	IC
	IC2	JCP0023	IC
	Q2	2SC4081(QRS)	TRANSISTOR
	Q4	DTA124EU	TRANSISTOR
	Q5	DTA124EU	TRANSISTOR
	Q6	DTC144EU	TRANSISTOR
	Q7	2SC4081(QRS)	TRANSISTOR
	Q8	2SA1576(QR)	TRANSISTOR
	Q9	2SC4081(QRS)	TRANSISTOR
	Q10	2SC4081(QRS)	TRANSISTOR
	Q13	2SA1576(QR)	TRANSISTOR
	Q14	2SC4081(QRS)	TRANSISTOR
	Q15	2SA1576(QR)	TRANSISTOR
	Q16	DTC144EU	TRANSISTOR
	Q17	2SC4081(QRS)	TRANSISTOR
	Q18	2SC4081(QRS)	TRANSISTOR
	Q19	2SA1577(QR)	TRANSISTOR
	Q20	DTC124EU	TRANSISTOR
	Q21	2SA1577(QR)	TRANSISTOR
	Q23	2SC4081(QRS)	TRANSISTOR
	Q24	2SC4081(QRS)	TRANSISTOR
	Q25	DTC114EU	TRANSISTOR
	Q29	2SA1267(YG)JK	TRANSISTOR
	or	2SA933S(RS)	TRANSISTOR
	Q30	DTA124EU	TRANSISTOR
	Q31	DTC144WU	TRANSISTOR
	D1	DAN202U	DIODE
	D2	DAN202U	DIODE
	D3	DAN202U	DIODE
	D4	DAN202U	DIODE
	D5	DAN202U	DIODE
	D6	DAN202U	DIODE
	R1	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R2	QRSA08J-221YN	RESISTOR 220Ω, 1/10W
	R3	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R4	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R5	QRSA08J-221YN	RESISTOR 220Ω, 1/10W
	R6	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R7	QRSA08J-823YN	RESISTOR 82KΩ, 1/10W
	R9	QRSA08J-121YN	RESISTOR 120Ω, 1/10W
	R10	QRSA08J-101YN	RESISTOR 100Ω, 1/10W
	R11	QRSA08J-471YN	RESISTOR 470Ω, 1/10W
	R12	QRSA08J-275YN	RESISTOR 2.7MΩ, 1/10W
	R17	QRSA08F-1693YN	RESISTOR 16.9KΩ, 1/10W
	R18	QRSA08F-1103YN	RESISTOR 11.0KΩ, 1/10W
	R19	QRSA08F-1433YN	RESISTOR 14.3KΩ, 1/10W
	R20	QRSA08F-1783YN	RESISTOR 17.8KΩ, 1/10W
	R21	QRSA08F-1203YN	RESISTOR 12Ω, 1/10W
	R22	QRSA08F-1183YN	RESISTOR 11.8KΩ, 1/10W
	R23	QVPA603-104	V RESISTOR, REC FM LEVEL 100KΩ
	R25	QRSA08J-623YN	RESISTOR 62KΩ, 1/10W
	R26	QRSA08J-101YN	RESISTOR 100Ω, 1/10W
	R27	QRSA08J-471YN	RESISTOR 470Ω, 1/10W
	R29	QRSA08J-223YN	RESISTOR 22KΩ, 1/10W
	R30	QRSA08J-153YN	RESISTOR 15KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
	R31	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R32	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R33	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R34	QRSA08J-103YN	RESISTOR 10KΩ, 1/10W
	R35	QVPA603-222	V RESISTOR, S SP VIDEO EQ 2.2KΩ
	R36	QVPA603-152	V RESISTOR, S LP VIDEO EQ 1.5KΩ
	R39	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R40	QRSA08J-821YN	RESISTOR 820Ω, 1/10W
	R41	QRSA08J-332YN	RESISTOR 3.3KΩ, 1/10W
	R42	QRSA08J-561YN	RESISTOR 560Ω, 1/10W
	R43	QRSA08J-362YN	RESISTOR 3.6KΩ, 1/10W
	R44	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R45	QRSA08J-182YN	RESISTOR 1.8KΩ, 1/10W
	R46	QRSA08J-223YN	RESISTOR 22KΩ, 1/10W
	R47	QRSA08J-151YN	RESISTOR 150Ω, 1/10W
	R48	QRSA08J-182YN	RESISTOR 1.8KΩ, 1/10W
	R49	QRSA08J-183YN	RESISTOR 18KΩ, 1/10W
	R50	QRSA08J-331YN	RESISTOR 330Ω, 1/10W
	R51	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R52	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R53	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R57	QRSA08J-561YN	RESISTOR 560Ω, 1/10W
	R58	QRSA08J-182YN	RESISTOR 1.8KΩ, 1/10W
	R59	QRSA08J-681YN	RESISTOR 680Ω, 1/10W
	R60	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R61	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R62	QRSA08J-222YN	RESISTOR 2.2KΩ, 1/10W
	R63	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R64	QRSA08J-101YN	RESISTOR 100Ω, 1/10W
	R65	QVPA603-682	V RESISTOR, N SP VIDEO EQ 6.8KΩ
	R66	QVPA603-332	V RESISTOR, N LP VIDEO EQ 3.3KΩ
	R69	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R70	QRSA08J-222YN	RESISTOR 2.2KΩ, 1/10W
	R71	QRSA08J-273YN	RESISTOR 27KΩ, 1/10W
	R72	QRSA08J-393YN	RESISTOR 39KΩ, 1/10W
	R73	QRSA08J-222YN	RESISTOR 2.2KΩ, 1/10W
	R74	QRSA08J-103YN	RESISTOR 10KΩ, 1/10W
	R75	QRSA08J-103YN	RESISTOR 10KΩ, 1/10W
	R76	QRSA08J-393YN	RESISTOR 39KΩ, 1/10W
	R77	QRSA08J-222YN	RESISTOR 2.2KΩ, 1/10W
	R80	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R81	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R82	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R83	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R84	QRSA08J-390YN	RESISTOR 39Ω, 1/10W
	R85	QRSA08J-103YN	RESISTOR 10KΩ, 1/10W
	R86	QRSA08J-182YN	RESISTOR 1.8KΩ, 1/10W
	R87	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R90	QVPA603-332	V RESISTOR, LP REC COLOR LEVEL 3.3KΩ
	R91	QVPA603-332	V RESISTOR, SP REC COLOR LEVEL 3.3KΩ
	R92	QRSA08J-563YN	RESISTOR 56KΩ, 1/10W
	R93	QRSA08J-153YN	RESISTOR 15KΩ, 1/10W
	R94	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R95	QRSA08J-393YN	RESISTOR 39KΩ, 1/10W
	R96	QRSA08J-183YN	RESISTOR 18KΩ, 1/10W
	R97	QRSA08J-332YN	RESISTOR 3.3KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	

PRE AMP BOARD ASSEMBLY 〈42〉

	PWBA	PB20473A-02	PRE AMP BOARD ASSEMBLY
	IC1	TA8609F	IC
	Q1	2SC2778	TRANSISTOR
	Q2	2SC2778	TRANSISTOR
	Q3	2SC2778	TRANSISTOR
	Q4	2SC2778	TRANSISTOR
	Q5	2SC2778	TRANSISTOR
	Q6	2SC2778	TRANSISTOR
	Q7	2SC2778	TRANSISTOR
	Q8	2SC2778	TRANSISTOR
	Q9	2SC2412K	TRANSISTOR
	Q10	DTA124EK	TRANSISTOR
	Q11	DTC144EK	TRANSISTOR
	Q12	DTA124EK	TRANSISTOR
	Q13	DTC144EK	TRANSISTOR
	Q14	DTA124EK	TRANSISTOR
	D1	DAP202K	DIODE
	D2	DAP202K	DIODE
	R1	QRSA08J-100YN	RESISTOR 10Ω, 1/10W
	R2	QRSA08J-272YN	RESISTOR 2.7KΩ, 1/10W
	R3	QRSA08J-100YN	RESISTOR 10Ω, 1/10W
	R4	QRSA08J-272YN	RESISTOR 2.7KΩ, 1/10W
	R5	QRSA08J-100YN	RESISTOR 10Ω, 1/10W
	R6	QRSA08J-272YN	RESISTOR 2.7KΩ, 1/10W
	R7	QRSA08J-100YN	RESISTOR 10Ω, 1/10W
	R8	QRSA08J-272YN	RESISTOR 2.7KΩ, 1/10W
	R9	QRSA08J-103YN	RESISTOR 10kΩ, 1/10W
	R10	QRSA08J-0R0Y	RESISTOR 0.0Ω, 1/10W
	R11	NVP1301-152N	V RESISTOR, HEAD RESON SP CH-1
	R12	QRSA08J-471YN	RESISTOR 470Ω, 1/10W
	R13	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R14	NVP1301-152N	V RESISTOR, HEAD RESON LP CH-2
	R15	NVP1301-152N	V RESISTOR, HEAD RESON LP CH-1
	R16	QRSA08J-103YN	RESISTOR 10KΩ, 1/10W
	R17	NVP1301-152N	V RESISTOR, HEAD RESON SP CH-2
	R18	QRSA08J-391YN	RESISTOR 390Ω, 1/10W
	R19	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R20	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R21	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R22	QRSA08J-122YN	RESISTOR 1.2KΩ, 1/10W
	R23	QRSA08J-561YN	RESISTOR 560Ω, 1/10W
	R24	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R25	QRSA08J-332YN	RESISTOR 3.3KΩ, 1/10W
	R26	QRSA08J-102YN	RESISTOR 1KΩ, 1/10W
	R27	QRSA08J-332YN	RESISTOR 3.3KΩ, 1/10W
	C1	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C2	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C3	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C4	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C6	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C7	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C8	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C9	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C10	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C11	PECA0779-200X	CHIP TRIM CAPACITOR
	C12	PECA0779-300X	TRIMMER CAPACITOR
	C13	PECA0779-200X	CHIP TRIM CAPACITOR
	C14	PECA0779-200X	CHIP TRIM CAPACITOR
	C15	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C16	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C17	QER41HM-105	E CAPACITOR 1μF, 50V
	C18	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C19	QER41HM-105	E CAPACITOR 1μF, 50V
	C20	QER41HM-105	E CAPACITOR 1μF, 50V
	C21	QCSA1HJ-101	CAPACITOR 100pF, 50V
	C22	QER41HM-105	E CAPACITOR 1μF, 50V
	C23	QCFA1HM-103	CAPACITOR 0.01μF, 50V
	C24	QER40JM-476	E CAPACITOR 47μF, 6.3V
	C25	QCFA1HM-103	CAPACITOR 0.01μF, 50V
	C30	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C31	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C32	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C33	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	C34	QCFA1HZ-103	CAPACITOR 0.01μF, 50V
	L1	PU59988-100J	COIL 10μH
	L2	PU59988-120J	COIL 12μH
	L3	PU59988-100J	COIL 10μH
	L4	PU59988-120J	COIL 12μH
	L5	PU48530-121K	COIL 100μH
	SLD1	PQ33385A-2	SHIELD PLATE ASSY
	SLD2	PQ33468-1-4	SHIELD COVER(1)
	SLD3	PQ44696	SHIELD COVER(2)
	TP1	PU56008	TEST-PIN
	CN2	PU58844-3	CONNECTOR
	CN3	YU40106-13	CONNECTOR

REC AMP BOARD ASSEMBLY 〈43〉

PWBA	PB10404D	REC AMP BOARD ASSEMBLY
CL1	PU59311-3	WIRE CLAMP
CL2	PU56729-2	WIRE CLAMP
SLD1	PQ21044-1-1	SHIELD FRAME
SLD2	PQ21045-1-2	SHIELD CASE
SLD3	PQ33421-1-1	SHIELD PLATE

—VIDEO REC SECTION—

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R98	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R100	QRSA08J-333YN	RESISTOR	33KΩ, 1/10W
	R107	QRD161J-102	RESISTOR	1KΩ, 1/6W
	R109	QRSA08J-272YN	RESISTOR	2.7KΩ, 1/10W
	C1	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C2	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C3	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C4	QCSA1HJ-121	CAPACITOR	120PF, 50V
	C5	QCSA1HJ-331	CAPACITOR	330PF, 50V
	C6	QCSA1HJ-121	CAPACITOR	120PF, 50V
	C7	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C8	QCSA1HJ-560	CAPACITOR	56PF, 50V
	C9	QCSA1HJ-271	CAPACITOR	270PF, 50V
	C10	QCSA1HJ-151	CAPACITOR	150PF, 50V
	C11	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C12	QER40JM-476	E CAPACITOR	47μF, 6.3V
	C13	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C14	QER41HM-104	E CAPACITOR	0.1μF, 50V
	C15	QFN41HJ-223	M CAPACITOR	0.022μF, 50V
	C16	QFN31HJ-223	M CAPACITOR	0.022μF, 50V
	C17	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C18	QCSA1HJ-820	CAPACITOR	82PF, 50V
	C19	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C20	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C21	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C22	QFN41HJ-223	M CAPACITOR	0.022μF, 50V
	C23	QFN41HJ-223	M CAPACITOR	0.022μF, 50V
	C24	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C26	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C27	QEK41CM-107	E CAPACITOR	100μF, 16V
	C28	QETA0JM-476	E CAPACITOR	47μF, 6.3V
	C29	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C30	QCSA1HJ-680	CAPACITOR	68PF, 50V
	C31	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C32	QCSA1HJ-180	CAPACITOR	18PF, 50V
	C33	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C34	QCSA1HJ-390	CAPACITOR	39PF, 50V
	C38	QCSA1HJ-120	CAPACITOR	12PF, 50V
	C39	QCSA1HJ-120	CAPACITOR	12PF, 50V
	C40	QCSA1HJ-390	CAPACITOR	39PF, 50V
	C42	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C43	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C44	QCSA1HJ-560	CAPACITOR	56PF, 50V
	C45	QCSA1HJ-560	CAPACITOR	56PF, 50V
	C48	QCSA1HJ-150	CAPACITOR	15PF, 50V
	C49	QCSA1HJ-120	CAPACITOR	12PF, 50V
	C50	QCSA1HJ-6R0	CAPACITOR	6RPF, 50V
	C51	QCSA1HJ-510	CAPACITOR	51PF, 50V
	C52	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C54	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C55	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C57	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C58	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C61	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C62	QCFA1HZ-103	CAPACITOR	0.01μF, 50V

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	C63	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C64	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C65	QCFA1HZ-103	CAPACITOR	0.01μF, 50V
	C66	QCSA1HJ-130	CAPACITOR	13PF, 50V
	C67	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C69	QEP41HM-105	NP E CAPACITOR	1μF, 50V
	C75	QCBB1HJ-101	CAPACITOR	100PF, 50V
	L1	PU59988-181J	COIL	180μH
	L2	PU59988-330J	COIL	33μH
	L3	PU59988-820J	COIL	82μH
	L4	PU59988-101J	COIL	100μH
	L5	PU59988-330J	COIL	33μH
	L6	PU48530-101K	COIL	100μH
	L7	PU59988-5R6J	COIL	56μH
	L8	PU48530-101K	COIL	100μH
	L9	PU59988-560J	COIL	56μH
	L10	PU59988-150J	COIL	15μH
	L11	PU59988-390J	COIL	39μH
	L12	PU59988-221J	COIL	220μH
	L13	PU59988-100J	COIL	100μH
	L14	PU59988-220JY	COIL	22μH
	L15	PU59988-270J	COIL	27μH
	L16	PU59988-820J	COIL	82μH
	L17	PU59988-180J	COIL	18μH
	L18	PU59988-180J	COIL	18μH
	L19	PU48530-101K	COIL	100μH
	L20	PU59988-680J	COIL	68μH
	L22	PU59988-181J	COIL	180μH
	L23	PU59988-181J	COIL	180μH
	CN1	PU56258-18	CONNECTOR	
	CN2	PU58844-3R	CONNECTOR	
	CN3	PU58844-3	CONNECTOR	
	CN4	PU60417-4	CONNECTOR	
	CN5	PU58844-8Y	CONNECTOR	
	CN6	PU60417-3	CONNECTOR	

—FMA REC SECTION—

IC201	AN3380NK	IC	
Q201	DTC124TU	TRANSISTOR	
Q202	DTC124TU	TRANSISTOR	
Q203	DTC114EU	TRANSISTOR	
Q204	2SC4081(QRS)	TRANSISTOR	
Q205	DTA114EU	TRANSISTOR	
Q206	DTC114EU	TRANSISTOR	
D203	1SS133	DIODE	
D204	1SS133	DIODE	
R201	NRVA62D-273N	RESISTOR	27KΩ, 1/16W
R202	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
R203	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
R204	QRSA08J-274YN	RESISTOR	270KΩ, 1/10W
R205	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
R206	QRSA08J-332YN	RESISTOR	3.3KΩ, 1/10W
R207	QRSA08J-101YN	RESISTOR	100Ω, 1/10W
R208	QRSA08J-332YN	RESISTOR	3.3KΩ, 1/10W

⚠	REF.No	PART No.	PART NAME,DESCRIPTION	
	R210	QRSA08J-103YN	RESISTOR	10KΩ, 1/10W
	R211	QRSA08J-152YN	RESISTOR	1.5KΩ, 1/10W
	R212	QRSA08J-222YN	RESISTOR	2.2KΩ, 1/10W
	R213	QRSA08J-102YN	RESISTOR	1KΩ, 1/10W
	R214	QRSA08J-560YN	RESISTOR	56Ω, 1/10W
	R215	QRSA08J-560YN	RESISTOR	56Ω, 1/10W
	R216	QVZ3521-331Z	V RESISTOR, FMA REC LEVEL	330Ω
	R217	QRSA08J-153YN	RESISTOR	15KΩ, 1/10W
	C201	QCFA1EZ-104	CAPACITOR	0.1μF, 25V
	C202	QCSA1HJ-391	CAPACITOR	390PF, 50V
	C203	QCSA1HJ-561	CAPACITOR	560PF, 50V
	C204	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C205	QCSA1HJ-561	CAPACITOR	560PF, 50V
	C206	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C207	QCFA1CZ-224	CAPACITOR	0.22μF, 16V
	C208	QCSA1HJ-391	CAPACITOR	390PF 50V
	C209	QEK60JM-107	E CAPACITOR	100μF, 6.3V
	C210	QCYA1HJ-103	CAPACITOR	0.01μF, 50V
	C211	QCYA1HJ-103	CAPACITOR	0.01μF, 50V
	C214	QCSA1HJ-330	CAPACITOR	33PF, 50V
	C215	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C216	QCYA1HJ-103	CAPACITOR	0.01μF, 50V
	C217	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C218	QCSA1HJ-102	CAPACITOR	0.001μF, 50V
	C219	QCYA1HJ-103	CAPACITOR	0.01μF, 50V
	C220	QEK61EM-476	E CAPACITOR	47μF, 25V
	C221	QCYA1HJ-103	CAPACITOR	0.01μF, 50V
	C224	QCFA1CZ-224	CAPACITOR	0.22μF, 16V
	L201	PU48530-101K	COIL	
	BPF20	PELN0374	BAND PASS FILTER	
	TP53	PU60142-2	TEST PIN, X2(TP53, TP54)	
	CN201	PU58844-8	CONNECTOR	

DECK TERMINAL BOARD ASSEMBLY 〈51〉

PWBA	PB10481A	DECK TERMINAL BOARD A SSEMBLY	
Q1	PU60625	END SENSOR	
R3	QRD161J-331	RESISTOR	330Ω, 1/6W
R4	QRD161J-331	RESISTOR	330Ω, 1/6W
R5	QRD161J-331	RESISTOR	330Ω, 1/6W
R8	NTH5D473KB	THERMISTOR	
or	ERT-D2ZHK473S	THERMISTOR	
or	NTH5D473KA	THERMISTOR	
C1	QCVB1CM-103	CAPACITOR	0.01μF, 16V
PS1	PS5705HR	PH INTERRUPTER	
PS2	PS5705HR	PH INTERRUPTER	

⚠	REF.No	PART No.	PART NAME,DESCRIPTION
⚠	TH601	PESC1041	POSITIVE THERMISTOR
	CN1	PEMC0722-018	WIRE TRAP
	or	PEMC0753-018	WIRE TRAP
	CN2	PU60642	7PIN CONNECTOR
	CN3	PU60640	4PIN CONNECTOR

LOADING MDA BOARD ASSEMBLY 〈55〉

PWBA2	PB30150A	LOADING MDA BOARD ASS EMBLY	
⚠ IC1	BA6418N	IC	
C1	QETA1CM-227	E CAPACITOR	220μF, 16V
C3	QETA1HM-105	E CAPACITOR	1μF, 50V
CN1	PU59555-104	CAP HOUSING	
CN2	PU58844-2	CAP HOUSING	

CASSETTE HOUSING BOARD 〈56〉

PWB1	PB40061	CASSETTE HOUSING BOARD	
Q2	PN268VI	PHOTO TRANSISTOR	
D1	UZ5.1BSB	ZENER DIODE	
or	RD5.1ESB2	ZENER DIODE	
R1	QRD162J-473	RESISTOR	47KΩ, 1/6W
R2	QRD182J-681	RESISTOR	680Ω, 1/8W
R3	QRD122J-102	RESISTOR	1KΩ, 1/2W
C1	QCC11EJ-103	CAPACITOR	0.01μF, 25V
PHS3	PU60629	CASSETTE SENSOR	
TH1	ERT-D2FHJ503S	THERMISTOR	
or	PESC1084	THERMISTOR	
or	ERT-D2FHK503S	THERMISTOR	
CN2	PU60639	4PIN SOCKET	

UPPER DRUM BOARD ASSEMBLY 〈62〉

PWB1	PDM3139	BOARD(UPPER DRUM)

E & O.E.No.82278